CLIPSAL INTEGRATED SYSTEMS

CLIPSAL Schedule Plus™ The Building Manager

Clipsal Schedule Plus Building Management Software for C-Bus

Schedule Plus Programmer's Guide

Version 3.1

CLIPSAL IBS Intelligent Building Series™

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Schedule Plus

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1 Product Range

The products included in this range are:

5000SP	Schedule Plus, Single Network Licence
5000SP5	Schedule Plus, 5 Network Licence
5000SPUNL	Schedule Plus, unlimited network licence

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2 Description

Schedule Plus is a software package which can be connected to the C-Bus home automation system. It can provide a central point of control and scheduling of services throughout the home.

The Schedule Plus Software can display a series of "pages" which contain clickable controls associated with various loads throughout the C-Bus Network. These pages may be re-configured by means of the Schedule Plus Software.

The appearance of every Schedule Plus setup will be unique, so your Schedule Plus display may not look like the examples in this guide.

Through the Schedule Plus Software the user may set up "scenes" with multiple loads ramping to their respective target levels together to set a particular mood at the press of a soft button. The Schedule Plus Software can also control loads according to a schedule.

A run-time version of Schedule Plus is supplied which disables the editing features. If desired, you can use the normal version of Schedule Plus to edit the project and then remove the editing version of Schedule Plus from the computer and use the run-time version for the day to day use.

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3 Menu Notation

The menu selections in this document will follow a simple menu description notation. If the user is using the Schedule Plus Software and chooses, for example, the menu selection **Edit,** then from the resulting menu chooses **Select** and then from that menu chooses **Select All** then this process will be described as **Edit** | **Select** | **Select All** as a shorthand description of this operation. Certain menu items offer several options, any one of which may be selected. In this case we can specify a range with square brackets and ellipses. For example, the width of a tick mark can vary from 1 to 5, this can be denoted by [1..5].

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4 Definitions

The following definitions are useful in discussing the Schedule Plus Software:

Term	Definition
Component	A graphical object displayed on a Schedule Plus page. Components include soft keys, images, text, clocks, temperature sensors and other items.
Page	A page is an assortment of related components that represents something understandable to the user.
Page Link	A method of causing the display to jump to another page.
Schedule	A schedule is a sequence of events that are to occur at particular times or dates in the future.
Load	A load is an electrical device controlled via a C-Bus output unit. Most loads are lights, but may be any device such as sprinklers, AC Power points, heaters, projection screen motors, AV equipment (via IR) etc.
Lighting Zone	Refers to an illuminated area. In Schedule Plus a zone is a C-Bus Group Address representing one or many loads connected to a C-Bus output unit. All the lights in your dining room might be in one zone.
Scene	A scene is defined as the combination of loads distributed in various control zones with different levels. The scene can be set up with the Schedule Plus Software and assigned to soft keys on the Schedule Plus Software.
Ramp Rate	The ramp rate indicates the length of time it takes for a load to ramp to a desired level.
Input Unit	An input unit is a C-Bus unit which the user interacts with to make things happen on a C-Bus Network (Schedule Plus itself, a key input unit or passive infrared sensor are examples).
Output Unit	An output unit is a C-Bus unit which delivers power to loads (a relay and dimmer are examples).

C-Bus related definitions which are useful when discussing Schedule Plus programming are given in the following sections.

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5 C-Bus Concepts

5.1 About C-Bus

C-Bus is a microprocessor controlled wiring system that uses Unshielded Twisted Pair cable (UTP cable) as its communication medium. C-Bus is intended to be used mainly as a lighting management system although it has the capability of interfacing with other services, such as security systems and air-conditioning.

C-Bus may be integrated as part of overall energy management system. C-Bus is highly flexible in the way it operates because each device on the Bus has its own in-built microprocessor. These devices can be programmed in the field to provide optimum energy management conditions in any installation.

Information comes from Input Units such as Key Units, Light Level Sensors and Infrascans. Messages are sent via the Bus to Output Units such as Relays and Dimmers. Connections between Input Units and Output Units are defined by Group Addresses (GA); thus GA can be considered as virtual wires. C-Bus Installation Software allows the user to modify GA as well as other parameters. All parameters including GA are stored in unit's non-volatile memory.

C-Bus is a truly distributed system. It does not have a central processing unit; C-Bus intelligence is distributed across entire network.

For further details about C-Bus, see the Clipsal web site at http://www.clipsal.com/cis.

5.2 Networks

Where a project exceeds the physical limitations of a single C-Bus network, the project may need to be segregated into several networks. Each network will need to be connected to one or more other networks via a bridge.

Some definitions are required for the understanding of C-Bus Networks :

- The computer uses a PC Interface (or PCI) to send and receive messages from C-Bus.
- C-Bus Networks which the computer is connected to are referred to as "Local" or "Connected Networks".
- The C-Bus Network which is used when creating new Components etc is referred to as the "Default" Network
- All other Networks are referred to as Remote Networks.
- A C-Bus Bridge is used to connect two C-Bus Networks together and to transmit messages from one Network to the other.
- A Fully Connected Network has every Network connected to every other Network via a C-Bus Bridge, and behaves as one large C-Bus Network.
- Application Connect Mode is a setting in a C-Bus Bridge that can be used to automatically send all messages from one of its Networks to the other. This makes the two Networks behave as if they were connected (there are some limitations though).

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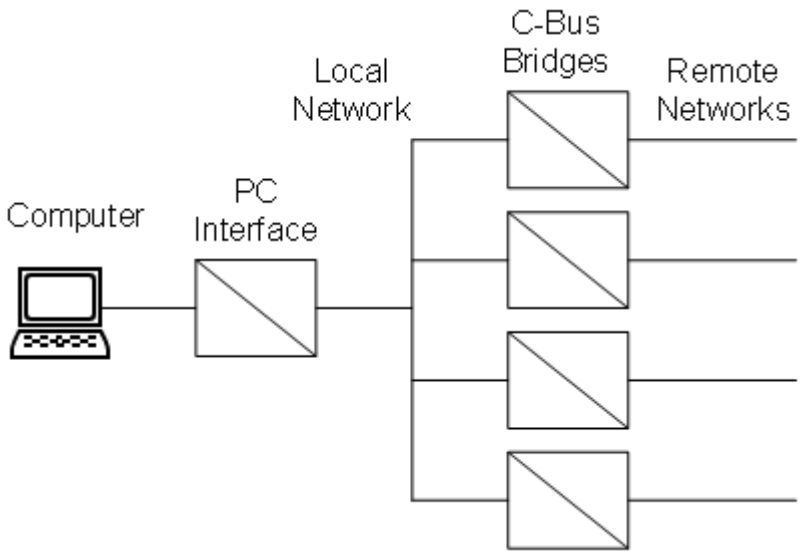
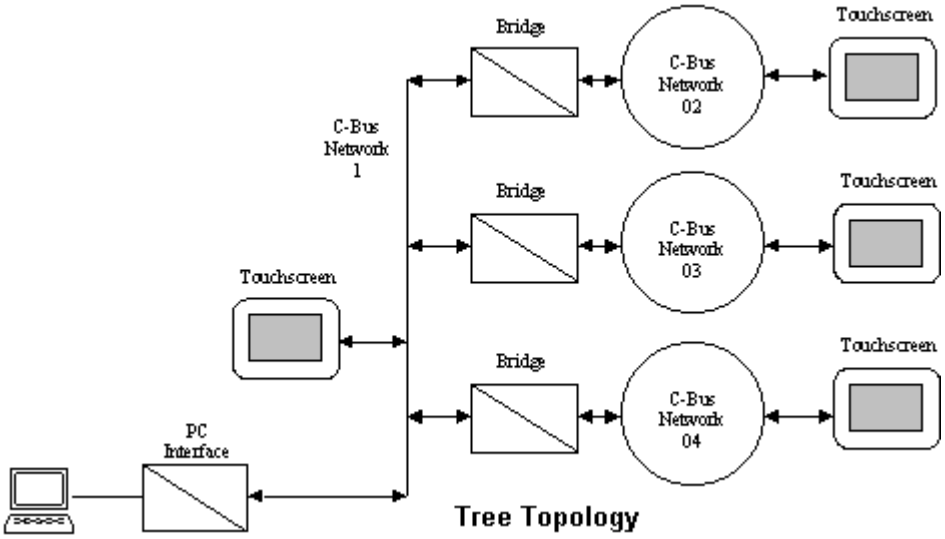


How the system works depends on how the networks are constructed. The networks below are each connected to other networks via a bridge. Each bridge is used in Application Connect mode (see the C-Bus documentation for more details). Each network has a Touchscreen on it which is capable of transmitting messages addressed to any network. The computer is running the Schedule Plus software, and is connected to Network 1 via a PC Interface.



The Schedule Plus software on Network 1 can send commands to its local network (Network 1) which will be automatically bridged across to the other networks. Each of the other Touchscreens will see the command and act accordingly (updating indicators etc). Note that it is necessary to have the PC Interface set to LOCAL SAL mode for this to work. Please contact CIS Technical Support for information on how to perform this setting.

The Schedule Plus software on Network 1 can also send bridged commands addressed to any one of the other networks. In this case, the command will arrive as an inter-network command and so the bridges will not automatically resend this across to the other networks.

If the Touchscreen on Network 2 sends a command to its local network, then the command will be automatically sent across the bridge to Network 1. However, since it will arrive at Network 1 as an inter-network command, it will not then be sent across the other bridges to the other networks. In this case, the Touchscreen and Schedule Plus software on Network 1 will see the command, but the others (on Networks 3 and 4) will not.

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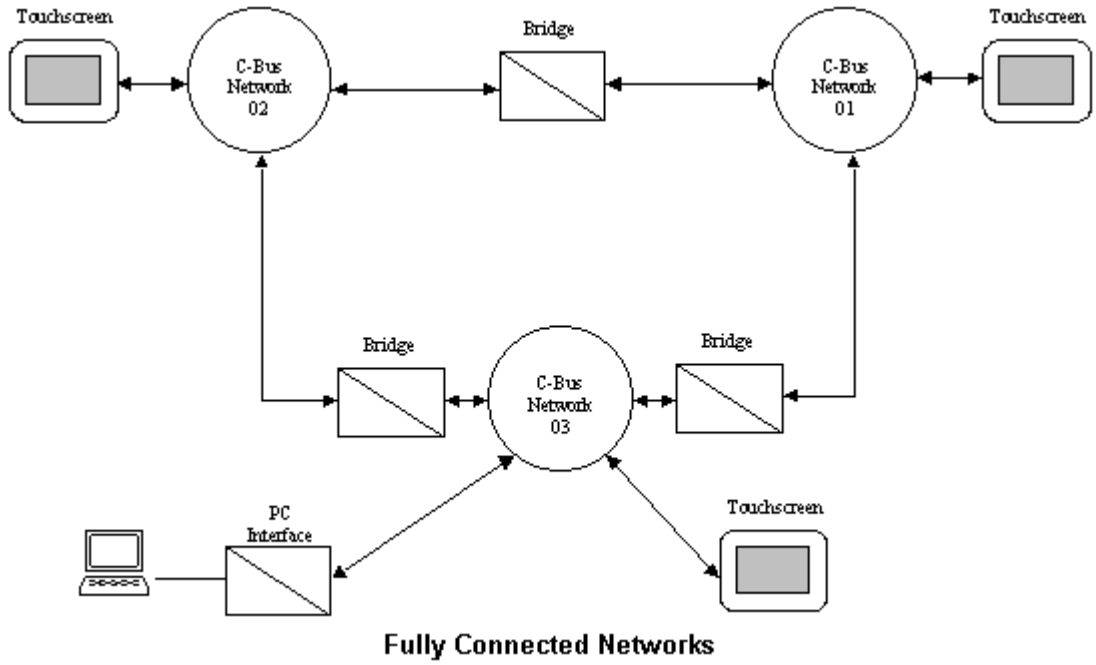
Fully Connected Networks

To make all C-Bus devices see all commands (and hence stay synchronised with each other), you will need fully-connected networks where every network is connected to every other network via a bridge, as shown below :



Fully Connected Networks

In the case of fully connected networks, in the Project Details dialogue, **Options** Tab you should set the **Model Networks Independently** to off.

If you have the same Group Address on the same Application used on different networks, they will be treated as being the same. Hence if you send a command to switch on Group Address 20 on a remote network, you will see that GA 20 on the local network is also on.

> ***Note that it will not have sent a command to the Local Network. If you want a command to go to the local network as well as other networks at the same time, you will need to use scenes.***

Notes regarding use of networks which are not fully-connected

If you have networks that are not fully-connected and you want to send a command to control a Group Address on another network, you can select the destination network for the command. When the command is sent, the path through the various bridges to the remote network will be included.

If the local network is connected to adjacent networks by bridges in Application Connect mode, messages will be sent between the networks by the bridges.

Message Tunneling

If the bridges are set up to send messages from remote networks back to the local network, you can monitor the state of the remote networks. Networks that are adjacent to the Local Network can send messages back to the Local Network using Application Connect Mode. Networks that are further away, can use Message Tunneling to send messages back to the Local Network.

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If Application Connect Mode / Message Tunneling is not enabled, it is best to avoid using indicators showing the state of Group Addresses on Remote Networks. If the software sends a command to a remote network, any Schedule Plus Components will show the correct state. If the state is changed by something on the remote network, the command may not appear on the local network, and hence the software will not show the correct state.

5.3 Applications

An "Application" is used to combine related system behaviour. Typically used applications are :

- Lighting (numbers 30 - 5Fhex, 38 is the default)
- Irrigation (number 71 hex)
- Heating (number 88 hex)
- Trigger Control (number CA hex)
- Enable Control (number CB hex)

The above Applications consist of Group Addresses and can be controlled by the Schedule Plus software. Note that you should never use any Application number other than the ones shown above, otherwise there may be unforeseen consequences.

There are other Applications used which are not directly controllable :

- Security
- Measurement
- Telephony
- Time

5.4 Group Addresses

A Group or Group Address is an "address" of one or more output loads. The Group Address is used to match an input device (keypad, touchscreen etc) with an output device (relay, dimmer etc) channel. Group Addresses can be given names ("tags") using the C-Bus Installation Software.

Note that the output unit logic is **not** modelled. The group addresses are controlled, not the output terminals.

In the Trigger Control Application, the Group Addresses are referred to as "Trigger Groups".

In the Enable Control Application, the Group Addresses are referred to as "Enable Groups".

The generic term for Group Addresses, Trigger Groups and Enable Groups is "Network Variables". A Network Variable is something that stores a value, and is synchronised across the Network (ie. all devices on the Network store the same value for the Network Variable).

5.5 Levels

Levels

Every Group Address has a level (or value) between 0 (0%) and 255 (100%).

How Levels are Used

In the Lighting Applications, the level corresponds to the lighting intensity or brightness. In other Applications, the level is used in other ways :

In the Trigger Control Application, the "Levels" are referred to as "Action Selectors" because they are selecting some sort of action to be performed. In Trigger Control, setting a Trigger Group to a particular Action Selector (Level) can be used to trigger a Scene or start an Irrigation program. Note that the EXACT Action Selector (Level) must be set, and ramping the Trigger Group through this Level will have no effect. You must also set the ramp rate to zero (i.e. an instantaneous change) rather than ramping to the Level. Ramping to the Action Selector (Level) may still cause the event to be triggered, but it will happen when the message is sent, NOT at the end of the ramp.

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In the Enable Control Application, the Levels are called "values". In Enable Control, setting an Enable Group to a particular value (level) can be used to enable a Schedule or to enable the Irrigation controller.

In Trigger and Enable Control, C-Bus Tags should be used to reference the Action Selectors and Values (ie Levels). Do not set the Action Selectors and Values in Percent because the value you are trying to set may be in between two percentage levels (in fact in these Applications, the concept of percent does not make sense).

To use a Network Variable value (Level) as a trigger or to enable something, it is essential that the C-Bus message that set the value must reach the Local Network. If a switch on a remote network is used to set a value, then there will need to be a C-Bus bridge to get the message onto the Local Network. Note that it is also necessary to ensure that the Tag for the value is created on both the Local Network and on the remote network.

Notes

The level of the Group Address associated with a Component controls the Visible Properties of the component.

See also Load Monitor

5.6 Percentage

C-Bus Group Address Levels are expressed as a number (decimal or hexadecimal) or as a percentage (0-100%). The conversion between the level and percent is :

Level = (Percent * 255) / 100

0% = 0
1% = 2
2% = 5
3% = 7
4% = 10
etc.

Percent = 100 * (Level + 2) / 255

0 = 0%
1 = 0%
2 = 1%
3 = 1%
4 = 1%
5 = 2%
etc.

Example : If level is 41, then Percent = 100*(41+2)/255 = 16.784 and we keep the whole number (16) and hence level 41=16%.

Because there are 256 discrete levels (0 to 255) but only 101 different percentages (0 to 100), not all levels have a unique corresponding percentage. If you are setting a group level as a percent, there will be some levels which you are unable to set. For example, if you want to set to a level of 5, you can set the level as 2% (see above). If you want to set to a level of 6, you will be unable. The next closest in this case will be 7 (3%).

A full list of conversions is provided in the Schedule Plus help file.

5.7 Ramp Rates

A C-Bus Group Address can be set to ramp to a Level over a certain amount of time. This time is

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called the Ramp Rate. Ramp Rates supported by C-Bus are :

- 0 seconds (instantaneously)
- 4 seconds
- 8 seconds
- 12 seconds
- 20 seconds
- 30 seconds
- 40 seconds
- 1 minute
- 1.5 minutes
- 2 minutes
- 3 minutes
- 5 minutes
- 7 minutes
- 10 minutes
- 15 minutes
- 17 minutes

Note that the ramp rate is the time to change the level from 0% to 100% or vice versa. If the level is at 50% and you execute a ramp to 100% with a 4 second ramp rate, it will only take 2 seconds.

5.8 C-Bus Tags

All C-Bus Applications, Group Addresses and Levels are assigned a number from 0 – 255 (0 – FF hexadecimal). Remembering these numbers is inconvenient, so a name can be assigned to them. The name is referred to as a "tag".

Examples of tags are :

- Network Tags
  - "Local Network"
  - "Third Floor"
- Application Tags
  - "Lighting"
  - "Control"
- Group Address Tags
  - "Kitchen Light"
  - "Pool Motor"
- Level Tags
  - "Welcome Home Scene"
  - "Irrigation On"

There are two ways of creating tags for use with a project :

- From the Software – in a dialogue box that has a drop-down list to select a group address or level, sometimes there will be two buttons alongside which allow you to add a new tag or to edit the selected one
- Using the C-Bus Tool Kit – see C-Bus documentation for details (sometimes this is the only method available)

To load the C-Bus tags into a project, open the Project Details dialogue box and select the C-Bus project with the required tags.

It is easiest to load the tags for a project before you start. You can, however, create a project and assign group addresses, then load the tags later.

See also Printing

5.9 Hexadecimal Numbers

A Hexadecimal number is a number represented in "base 16". Everyday numbers are represented

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in decimal, which is base 10. In the decimal system numbers are expressed with 10 symbols; the familiar digits 0-9. The hexadecimal system uses 16 symbols, the ten digits (0 to 9) plus six letters (A to F) to stand for "digits".

In the decimal system, once the number 9 (the last digit) is reached, a symbol has to be placed in the next column (the "tens" column) to create a number with two digits. In the hexadecimal system, in exactly the same way, once the number "F" (the last digit) is reached a symbol must be placed in the next column (the "sixteens" column).

A comparison between the two is shown below (decimal = hexadecimal) :

0 = 00	1 = 01
2 = 02	3 = 03
4 = 04	5 = 05
6 = 06	7 = 07
8 = 08	9 = 09
10 = 0A	11 = 0B
12 = 0C	13 = 0D
14 = 0E	15 = 0F
16 = 10	17 = 11
18 = 12	19 = 13
20 = 14	21 = 15
22 = 16	23 = 17
24 = 18	25 = 19
26 = 1A	27 = 1B
28 = 1C	29 = 1D
30 = 1E	31 = 1F
32 = 20	33 = 21

A complete list is provided in the Schedule Plus help file.

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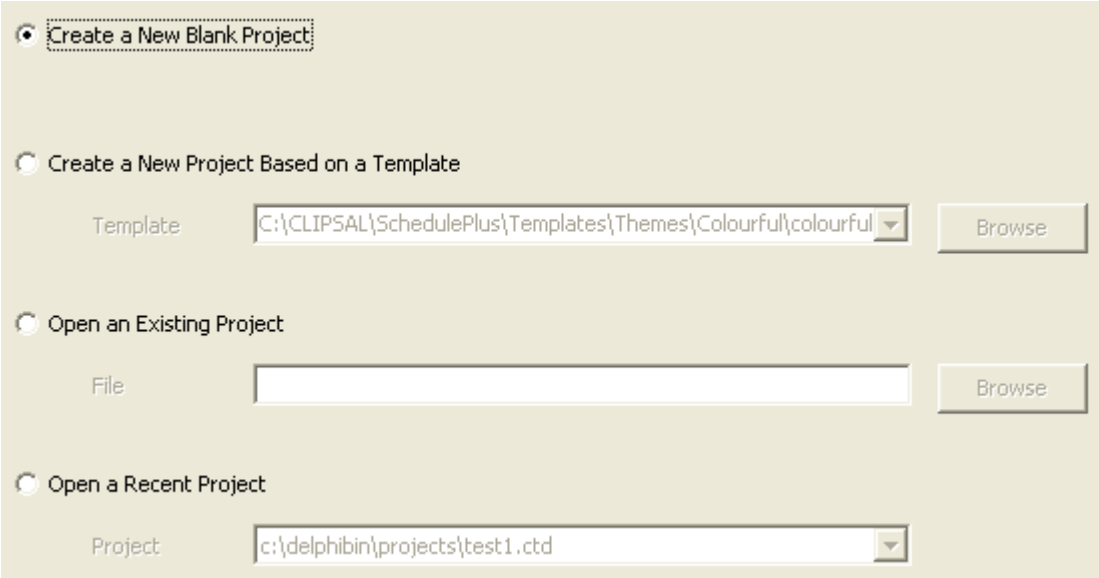
6 Configuring the Schedule Plus Software

6.1 Starting the Software

The simplest way to start the Schedule Plus software is to use the start menu item. If you have installed the software using the defaults, then click on the **Start** button, click on **Programs**, then **Clipsal**, then **Schedule Plus** then **Schedule Plus**.

When the program starts, you will see the Project Details wizard which will allow you to create a New Project, Open a Project, or re-open an existing project.



If this is the first time you have used the software, select the **Open an Existing Project** button, select one of the example projects, click on the **OK** button, then click on the **Finish** button.

Note that the Schedule Plus should not be run at the same time as the C-Bus Tool Kit. They use C-Gate in different modes and also there can be problems caused by the two programs simultaneously accessing the C-Bus tag database.

6.2 Software Screen

The Schedule Plus Software is a Windows™ application that uses a graphical representation of various controls and objects associated with the programming of the Schedule Plus Software. When the Schedule Plus Software is opened, you will see a screen something like that below.

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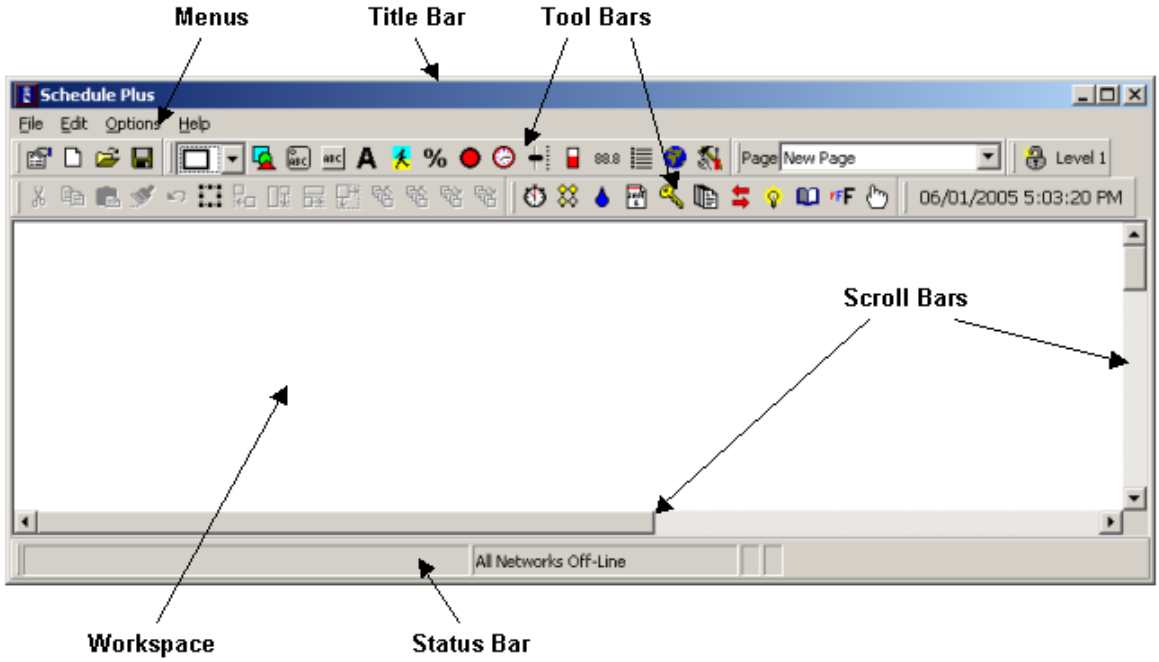


The features are :
Menus : the menus provide access to the software functions
Title Bar : this shows the name of the software and the loaded Project (if any)
Tool Bars : the Tool Bars provide quick access to the common software functions
Scroll Bars : these allow you to select which part of the work space you wish to look at
Work Space : this is where you create and edit the project
Status Bar : this shows :

- the status of the C-Bus connection
- details of the selected Component
- the status of the Schedules
- the status of the Logic Engine

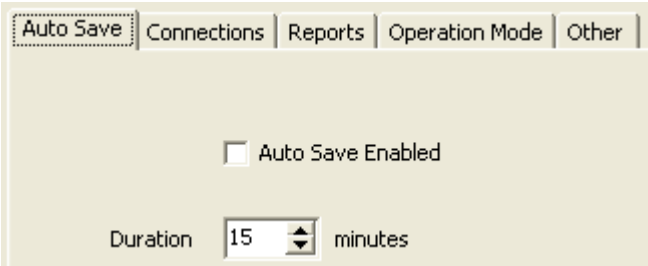
Before a project can be created the design environment provided by the Software can be configured to operate in a way most convenient to the user. The following sections describes these preliminary configuration settings.

6.3 Program Options

The Schedule Plus Software can have various options configured by selecting the **Program Options** item from the **Options** menu.

Auto Save

When Auto Save is enabled, the project will be saved at regular intervals. The interval can be set to between 5 and 60 minutes.



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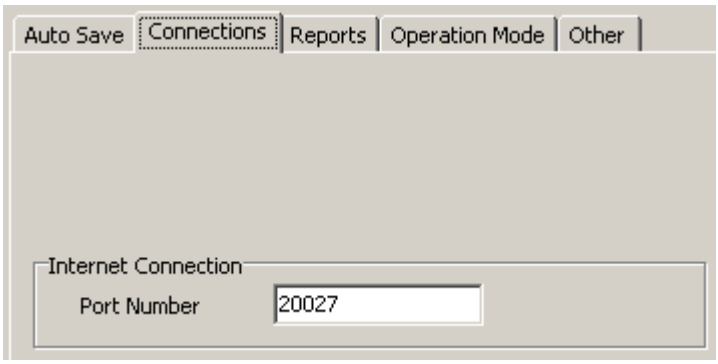
Connections

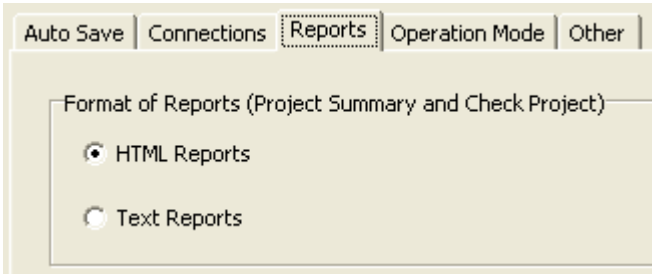
This tab allows you to choose how to connect to the Internet.



The Internet port number is used for Internet Access (via ServerX for example).

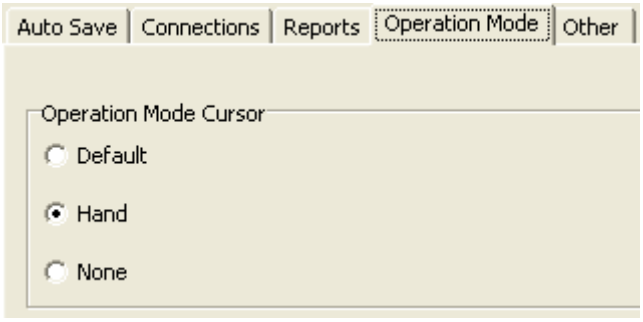
Reports

This allows you to select whether you want your Project Summary and Check Project reports presented as an HTML report (to read or print using a web browser) or as a text file for inclusion in some other document.



Operation Mode

It is also possible to select the type of cursor for when Operation Mode is running. If you are using a Touch Panel PC, it may be desirable to have no cursor displayed.



Other

By default, when the right mouse button is clicked on a component, the action for that component is executed. Alternatively you can have a pop-up menu appear when the right mouse button is clicked.

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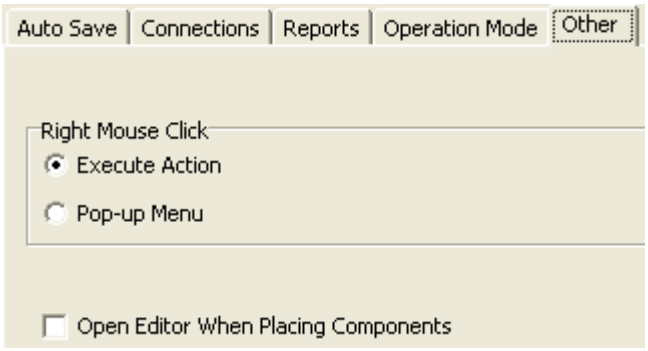
If you wish to have the Component Properties editor open when a component is first placed on a Page, select the **Open Editor When Placing Components** check box.



6.4 Operation Mode

To disable editing functions, the Schedule Plus software can be placed in Operation Mode by either:

- selecting the Operation Mode item from the **Options** menu; or
- by pressing **CTRL + S**
- clicking on any component with the Operation Mode Special Function property set.

To get out of Operation Mode, you can

- press **CTRL + S** ; or
- click on any component with the Exit Operation Mode Special Function property set.

Operation Mode does the following things :

- Components are activated by a left **or** right mouse click (this is useful for running on Touch Panel PCs)
- The menus and tool bars are hidden
- The Window is set to the same size as the Project Screen Size

If the Project Screen Size is the same as the Computer Screen Size, there will be no program border or caption bar. To make the project fill the screen, but still have the program border and caption bar, set the Project screen size to have a height and width a few pixels less than the computer screen size.

Note that the Operation Mode cursor image can be set in the Program Options dialogue box.

See also
Program Options
Logging
Command-Line Parameters

6.5 Internet Access

The Schedule Plus program can be accessed via the Internet (World Wide Web). Please refer to the Internet Access User Guide for full details.

To allow the project to be controlled via the Internet, select the **Connect to WWW** item from the **Options** menu. This will open the port selected in the Program Options to allow control via a CGI script or ServerX.

When an application connects to the ServerX port, it will be indicated that user access is locked in red writing across the screen. During this time, it will not be possible to control the software from the PC. This prevents more than one user from controlling the software at the same time which would cause confusion. To "unlock" the ServerX access, press **Ctrl + U**.

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There are three factors which affect the Internet download speed :

- Image quality
- Screen Size
- Complexity

The quality of the JPEG image returned to the web browser can be selected from the **Options | JPEG** Quality menu item. A low quality file is smaller than a high quality file and will download more quickly via the Internet. If you have a slow connection to the Internet, it may be preferable to sacrifice some image quality for improved speed.

Another factor affecting the download speed is the Screen Size. A larger screen size will generally take longer to download because the image is larger.

The last factor affecting download speed is the complexity of the screen. If you have a plain background, with just a few components, it will be quite fast. If you have lots of components, and in particular, big images, it will be much slower.

There are two things that can not be done via the Internet :

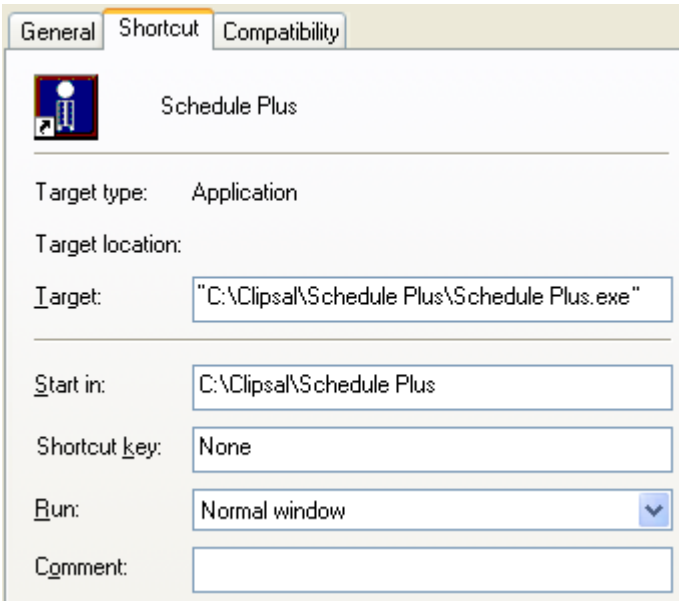
- Clicking on a component with most Special Functions will do nothing
- You can not perform any function which would show a dialogue box (eg. Editing Scenes etc).

See also
- Command-Line Parameters
- Program Options

6.6 Command Line Parameters

The Schedule Plus program can be started with various properties enabled upon start-up. These properties are called Command-Line Parameters. For example the program can start with a particular file loaded, and with the C-Bus communications channel already open. This is particularly useful when the program is set to automatically start when the computer is started (by having the program in the Windows StartUp folder) or if you have a Desktop shortcut.

To set the command-line parameters, right click on the Schedule Plus shortcut (on the desktop or Start menu), and select the **Properties** item. The command-line parameters are entered into the **Target** box.



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The syntax is as follows :

ExeFilename [***filename***] [***/cgate***] [**/www**] [**/jpeg=***level*] [**/operate**] [**/nosplash**] [**/syncschedules**] [**/log=enable** | **/log=save** | **/log=append**] [**/autosave** | **/autosave=time**]

Where :

- ***ExeFilename*** is the path and file name of the executable file. Note that if there are spaces in the executable file path or file name, the ExeFileName must be enclosed within double quotes.
- ***Filename*** is the name of a file to be loaded. Note that if there are spaces in the file name, the file name must be enclosed within double quotes.
- ***/cgate*** selects whether C-Bus communications are to be opened with C-Gate.
- **/www** determines whether to connect via the World Wide Web
- **/jpeg** determies the compression of jpeg images for www access. Options are **low**, **medium**, **high** or **best** (default is **high**).
- **/operate** puts the program in Operation Mode
- **/nosplash** shows the splash screen for only the minimum amount of time
- **/syncschedules** performs a Synchronise to Schedules after connection to C-Gate
- **/log=enable** enables the logging
- **/log=save** enables the logging and saves it to a log file
- /**log=append** enables the logging and appends it to the log file
- **/autosave** sets the autosave feature on, with the default duration (15 minutes)
- **/autosave=time** sets the autosave on with the specified time (in seconds)

The ExeFileName must be present, and must be first. The FileName is optional, but if used, must be second. All other parameters are optional and may occur in any order. There must be a space between each parameter.

Examples :

"C:\Clipsal Schedule Plus**.exe" "C:\Clipsal**Schedule Plus**\Projects\MyHouse.ctd"**
will load the file MyHouse.ctd at start-up

"C:\Clipsal Schedule Plus**.exe" "C:\Clipsal**Schedule Plus**\Projects\MyHouse.ctd" /cgate /log=save**
will load the file MyHouse.ctd at start-up and connect via C-Gate, with logging enabled.

"C:\Clipsal Schedule Plus**.exe" "C:\Clipsal**Schedule Plus**\Projects\MyHouse.ctd" /cgate /www /jpeg=high**
will load the file MyHouse.ctd at start-up and connect via C-Gate, with web access with high quality jpeg images

See also Desktop Shortcut.

6.7 Creating a Desktop Shortcut

To create a desktop shortcut which will start the software and load the currently loaded file, select the **Create Desktop Shortcut** item from the **File** Menu.

The desktop shortcut will be created with the following parameters :

- The currently loaded file
- The current connection to C-Bus

Once the shortcut has been created, you may add other Command-Line Parameters by selecting the shortcut, right clicking on it and setting the properties.

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7 Using the Schedule Plus Software

7.1 Tool Bars

All program functions are available via menu items. Many of the commonly used functions are also available on the tool bars, which are the panels with a series of buttons on them.

The tool bars are at the top of the screen by default, but the tool bars can be configured to suit personal preference by :

- moving them onto any position on the screen (click on the vertical bar on the left of the toolbar and drag it)
- docking them to another place on the screen (drag a toolbar to the top, bottom, left or right of the screen)
- closing them (by dragging them onto the screen, then clicking on the close button)

In addition to manipulating individual tool bars, they can be modified together :

- Hide/close all tool bars by selecting **Hide Toolbars** from the **Options** menu
- Show all hidden tool bars by selecting **Show Toolbars** from the **Options** menu
- Restore the original position of all tool bars by selecting **Restore Toolbars** from the **Options** menu

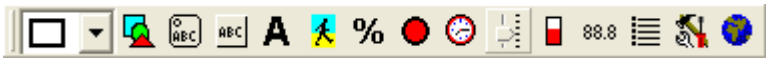
The Main Form toolbars are shown below :

Project Toolbar

The Buttons' functions are (respectively) :

- Project Details
- Add Page
- Open a Project
- Save the Project

Place Components Toolbar



The Buttons' functions are (respectively) :

- Select which Shape to place
- Place a Shape Component
- Place a C-Bus Button Component
- Place a button Component (e.g. for a Page Link)
- Place a Text Component
- Place an Image Component
- Place a Level Indicator Component
- Place an Indicator Component
- Place a Clock Component
- Place a Slider Component
- Place a Bar Slider Component
- Place a Monitor Component
- Place a Selector Component
- Place a Tool Component
- Place an HTML Component

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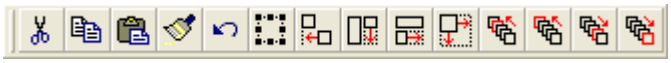
Page Select Toolbar

This allows you to select which page you wish to view.

Access Control Toolbar

The button allows you to Log-in / Log-out. The text shows you to current Access Level.

Edit Toolbar



The Buttons' functions are (respectively) :

- Cut Component
- Copy Component
- Paste Component
- Paint Format of Component
- Undo last action
- Select All Components
- Align Components
- Set Component(s) Height to match selected Component
- Set Component(s) Width to match selected Component
- Set Component(s) Size to match selected Component
- Move Component Back
- Move Component to Back
- Move Component Forward
- Move Component to Front

Tools Toolbar

The Buttons' functions are (respectively) :

- Open Schedule Manager
- Open Scene Manager
- Open Irrigation Manager
- Open Special Day Manager
- Open Access Control Manager
- Open Logic Editor
- Open Load Monitor
- Open Log
- Set default Font
- Set Operation Mode

Time Toolbar

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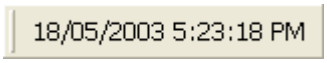

This shows you the current date and time. Double clicking on the toolbar allows you to set the computer date and time.

To see the function of any item on a toolbar, hold the mouse over the item in the Schedule Plus software, and you will see a hint pop-up.

7.2 Keyboard Shortcuts

There are various actions which can be performed using the keyboard which can be much faster than using a mouse to select a menu item. These Keyboard Shortcuts are listed below :

Shortcut	Action
Page Selection	
CTRL + Page Up	Select the previous Page
CTRL + Page Down	Select the next Page
CTRL + Home	Selects the Start-up Page
Component Selection	
CTRL + A	Select all of the Component(s) on the Page
CTRL + E	De-select all of the selected Component(s)
CTRL + Left Click	Toggle selection of a Component
Shift + Left Click	Drag to select all Components in an area
Component Editing	
CTRL + ↑	Move selected Components up by one Grid spacing
CTRL + ↓	Move selected Components down by one Grid spacing
CTRL + ←	Move selected Components left by one Grid spacing
CTRL + →	Move selected Components right by one Grid spacing
CTRL + C	Copy the selected Component(s)
CTRL + X	Cut the selected Component(s)
CTRL + V	Paste the selected Component(s)
CTRL + F	Paint the format to the selected Component(s)
CTRL + Delete or Delete	Delete the selected Component(s)
CTRL + Z	Undo the last action
CTRL + G	Copy the group address from the Primary Selection to the Secondary Selection(s).
Esc	Cancel the Placement of a Component
Component Alignment and Size	
CTRL + H	Make the height of Secondary Selection(s) the same as the Primary Selection
CTRL + W	Make the width of Secondary Selection(s) the same as the Primary Selection
CTRL + B	Make both (height & width) of Secondary Selection(s) the same as the Primary Selection
CTRL + Shift + A	Align the Secondary Selection(s) to the Primary Selection

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CTRL + Shift + L	Align the Left of the Secondary Selection(s) to the Primary Selection
CTRL + Shift + T	Align the Top of the Secondary Selection(s) to the Primary Selection
CTRL + Shift + R	Align the Right of the Secondary Selection(s) to the Primary Selection
CTRL + Shift + B	Align the Bottom of the Secondary Selection(s) to the Primary Selection

Other

CTRL + S	Operation Mode
F1	Help
Alt + F4	Exit the Schedule Plus software
CTRL + Shift + E	Raise a deliberate error message for test and training purposes. This is not a real error. Do NOT report to CIS.

7.3 Step by Step Guide

To use the Schedule Plus Program, follow these steps :

- Create any C-Bus Tags needed using the C-Bus Tool Kit
- Create a directory to put your project in (all image files will be put there) - Schedule Plus can do this for you when you Save the Project
- Create a new project
- Set the Project Details
- Add pages
- Add components to each page
- Add links to the pages
- Create Scenes
- Create Schedules
- Set up the Irrigation Control if required
- Set up the Access Control if required
- Check the Project for errors, and correct them
- Check the project Summary if desired
- Test the project (Operation Mode)
- Save the project
- Archive the files for later use

7.4 Creating and Saving Projects

7.4.1 Project

A Schedule Plus Project consists of the following things created for the end user to use :

- Pages of Components
- Scenes
- Schedules
- Irrigation Control
- Access Control
- Special Days
- Logic

All of this data is saved in the Project File. There are other things which are also stored in the directory with the Project file :

- any images used by the project
- Log files
- Project Details Reports and Error Reports

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- Load Duration data

7.4.2 Opening a Project

To open a project, either click on the **Open** button of the tool bar, or select the **Open** item from the **File** menu. Select the directory where your project is stored, and select the file name. The default file extension of a project file is **CTD**. Click on OK.

Project files with the extension ".cte" are secure project files which have been encrypted to protect against tampering.

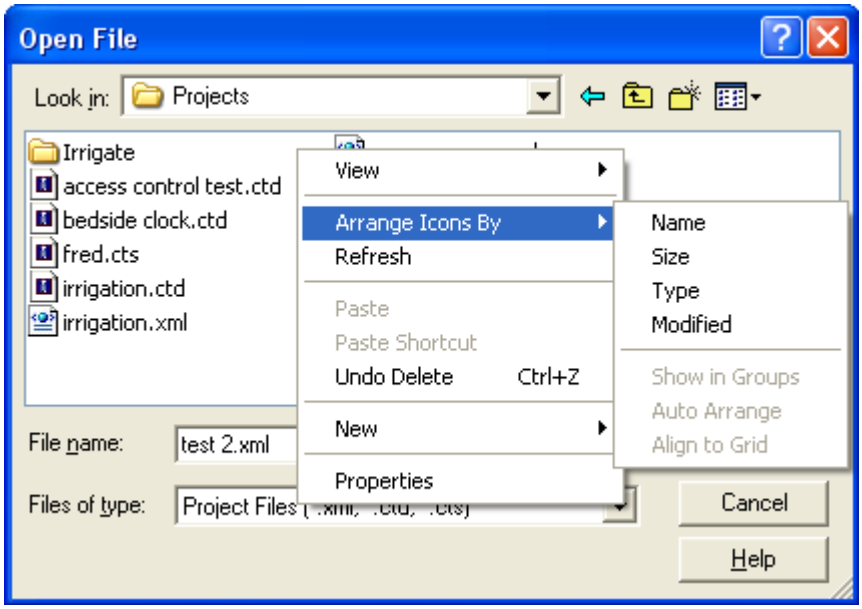
To open a project which has been recently opened, select **Reopen** from the **File** menu.

To add pages from a project to the one which is currently open, select **Import Page** from the **File** menu or select **Reimport Page** from the **File** menu.

Notes :

If an image file is missing when a project is opened, an error message will be displayed. A large X will be placed where the missing images should be.

While the Open File dialogue box is open, you can right click on the area where the files are displayed (not on a file) and select how you want them sorted :



7.4.2.1 File Types

The file extensions of the file types used by the Schedule Plus software are listed below :

- CTD : Project data file
- CTP : Template file
- CTE : Secure Project file - this encrypts the file when it is saved to prevent tampering
- CTA : Project Archive file
- XML : this was the Project file used by older versions of this software, and can still be opened by this version
- ~CTD : project back-up file
- ~CTP : back-up template file
- ~CTE : back-up secure Project file

To convert all of the Project files in a directory (and its sub-directories) from the old format (*.XML) to the new format (*.CTD), select the **Convert Files** item from the **File** menu and select the

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required directory. You will be presented with a list of all of the files which have been converted.

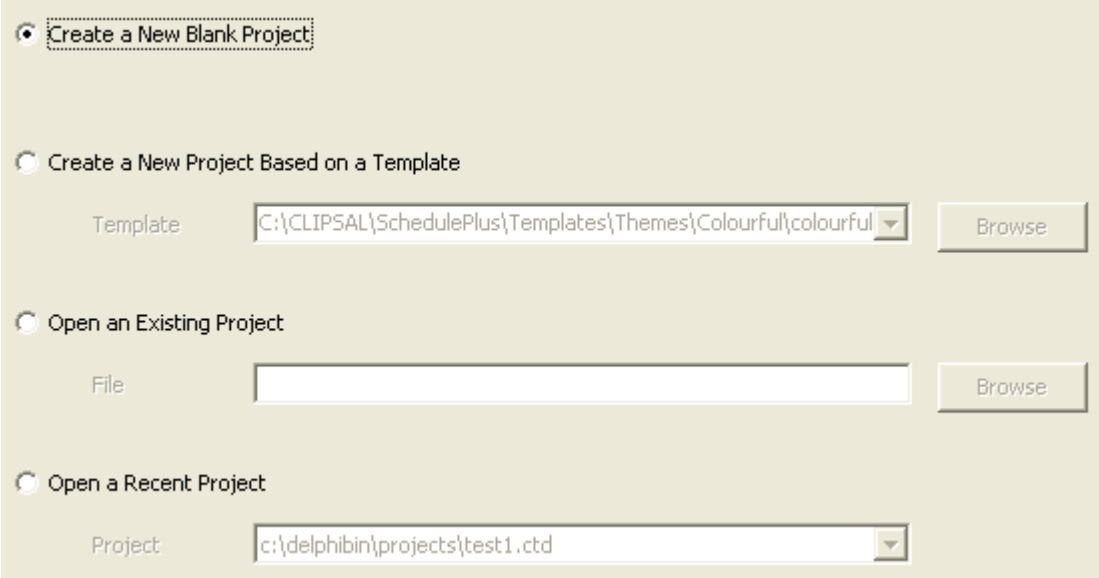
7.4.2.2 Loading C-Touch Projects

It is common to have C-Touch Touchscreens installed in an installation and to have the Schedule Plus software running on a PC at the same time. It is possible to load a C-Touch project file into this software to save having to enter the same data again. To do this :

- Open the C-Touch Project File
- Resize the Project if required
- Make any changes as necessary
- Save the file under a different name

7.4.3 Creating a new Project

When the software first starts, the Project Details Wizard will be displayed :



To create a new project at any other time, select the **New Project** menu item from the **File** menu.

The Project Details Wizard will allow you to

- **Create a New Blank Project**
- **Create a New Project Based on a Template** : click on the **Browse** button to load a Template or Theme for the Project
- **Open an Existing Project** : click on the **Browse** button to select the Project
- **Open a Recent Project** : select the Project from the drop-down list

If you are creating a new project, click on the **Next** button to set the rest of the Project Details.

See also Good Design Practices

7.4.4 Setting the Project details

When a new Project is created, all of the parameters will be set to default values. To set Project details, select the **Project Details** item from the **Edit** menu. The Project Details Wizard will appear which will allow you to set various Project-related parameters :

- Project Type / Screen Size
- C-Bus Project
- Detault Network
- Project Details
- Installer Details

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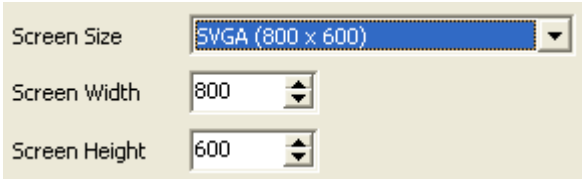
- Options
- C-Bus Options
- Location
- Daylight Savings
- Auto Page Creation

7.4.4.1 Project Type / Screen Size

The **Screen Type** tab on the Project Details dialogue box allows you to select the Project screen size :

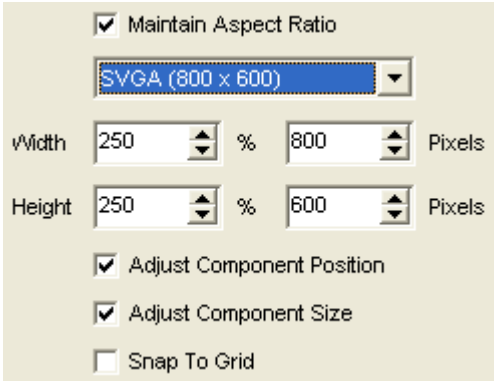
- Selecting **Screen Size** will set it to the current size of the computer screen.
- Select **QVGA**, **VGA**, **SVGA**, **XGA**, **SXGA** or **UXGA** to set the screen to standard screen sizes.
- To set another size, select **Custom** and enter the desired size.



When complete, click on the **Next** button.

Project Re-Sizing

The Project Screen Size can be changed by selecting the **Resize Project** item from the **File** menu. A dialogue box will appear giving various options :



Select the desired size by :

- Selecting a size from the drop-down list
- Enter the desired size in pixels
- Enter a Scaling (%)

If the **Maintain Aspect Ratio** box is selected, the Aspect Ratio (the ratio of width to height) will be kept constant. This means that if you make a change to the width boxes, the height will change accordingly and vice versa.

To have the components moved to their new positions, select the **Adjust Component Position** check box. If this is not selected, the project screen size will change, but the components will not be affected (unless they would be off the screen with the new screen size).

You can have the Components resized to the same scale by selecting the **Adjust Component Size** check box.

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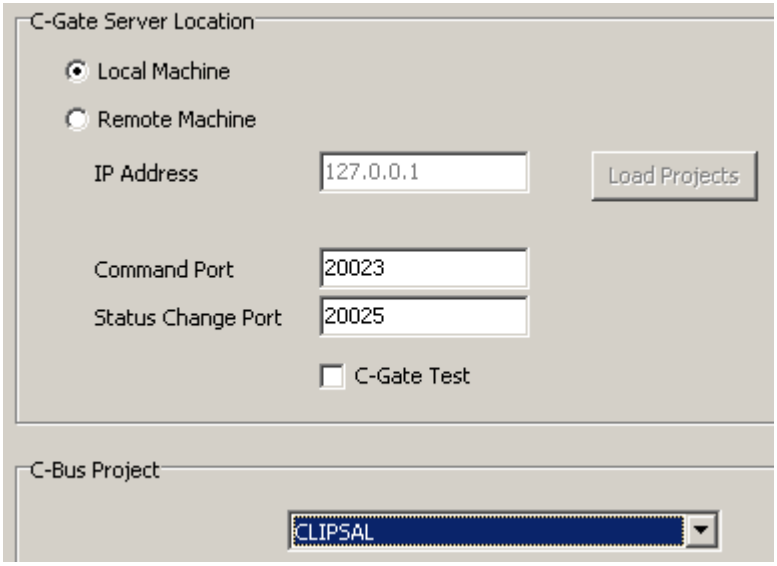
To have all of the Components placed on the Grid, select the **Snap To Grid** check box.

7.4.4.2 C-Bus Project

The Unit Address page of the Project Details Wizard allows you to select the a C-Bus project. A C-Bus project must be selected from the list in order for C-Bus Tags to be available.



Most of the time you will want to use the C-Gate on your Local Machine (the computer which Schedule Plus is running on). In this case, the **Local Machine** option needs to be selected.

If you want to connect to C-Gate on a remote machine :
- select the **Remote Machine** option
- enter the **IP Address** of the remote machine
- click on the **Load Projects** button
- select the required **C-Bus Project**

If you have C-Gate configured to use a non-standard **Command Port** or **Status Change Port**, the port numbers should be entered.

The **C-Gate Test** option can be selected if you want to regularly send a command to C-Gate to verify that the connection is still OK.

When complete, click on the **Next** button.

7.4.4.3 Default Network

The Default Network page of the Project Details Wizard allows you to select the network that you will be using the most often. The default network is used for :
- the network for newly created components
- tags for scene triggers
- tags for irrigation triggers
- tags for schedul enabling

When complete, click on the **Next** button.

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7.4.4.4 Project Details

The **Project** page on the Project Details Wizard allows you to enter details of the Project (name, location etc).

When complete, click on the **Next** button.

7.4.4.5 Installer Details

The **Installer** page on the Project Details Wizard allows you to enter the details of the C-Bus Installer :

When complete, click on the **Next** button.

7.4.4.6 Options

The **Options** tab on the Project Details dialogue box allows you to select various options for Schedule Plus :

- Set Time-Out parameters
- Set Start-up screen details (these are shown when Schedule Plus first opens the project)
- Select the properties for the Alarm (how often it goes off, how long it will continue and the snooze time)

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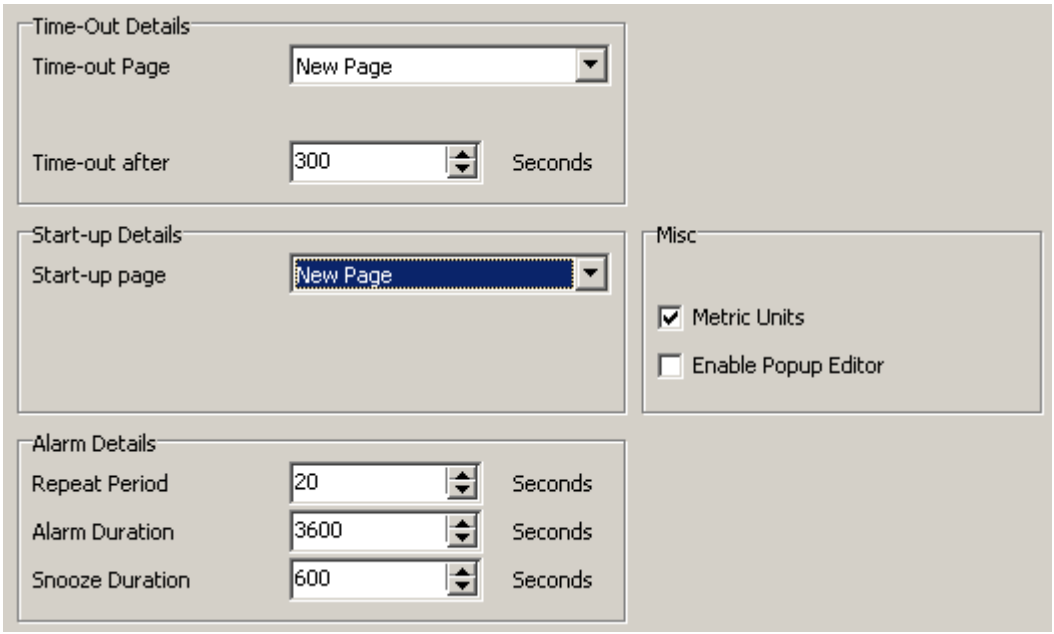
- The network modelling
- Metric Units can be selected to display Temperature in Centigrade, rather than Fahrenheit.



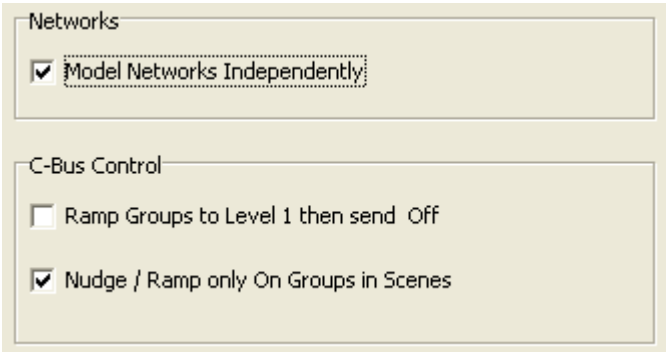
The **Enable Popup Editor** option is for when you have the software running on a computer with no keyboard, but with a touch screen. Anywhere that data needs to be entered, you can use the pop-up editor so that you can edit new data without needing a keyboard.

When complete, click on the **Next** button.

7.4.4.7 C-Bus Options

The **C-Bus Options** page on the Project Details Wizard allows you to select :

- various C-Bus options.
- The network modelling


Networks
Model Networks Independently
C-Bus Control
Ramp Groups to Level 1 then send Off
Nudge / Ramp only On Groups in Scenes

Ramp Groups to Off

When a group address is ramped to level 0, the command is received by all C-Bus Units on the network. On some old C-Bus input units, the status indicator will go off as soon as this message is seen, even though the level is still above 0 for some time. For this reason, many devices send a "ramp to level 1" command followed by an "off" command when the level gets to 1. In this case, the

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input unit status indicators will show the state correctly. To select this behaviour, select the **Ramp Groups to Level 1 then send Off** check box.

If this check box is not selected, then ramping to level 0 will be done with a single "ramp to level 0" command.

Nudge / Ramp Scene

When a Scene is nudged up and down or ramped up and down (using the Nudge Up, Nudge Down, On/Up, Off/Down and Dimmer Key Functions), it is usually desirable to just control the group addresses in the Scene which are already on. To select this behaviour, select the **Nudge / Ramp only On Groups in Scenes** check box. This will result in the following occurring :

- Nudge Up, On/Up and Dimmer will only increase the level of Group Addresses which are already on
- Nudge Down, Off/Down and Dimmer will only decrease Group Addresses which are on, and only to a minimum level of 1

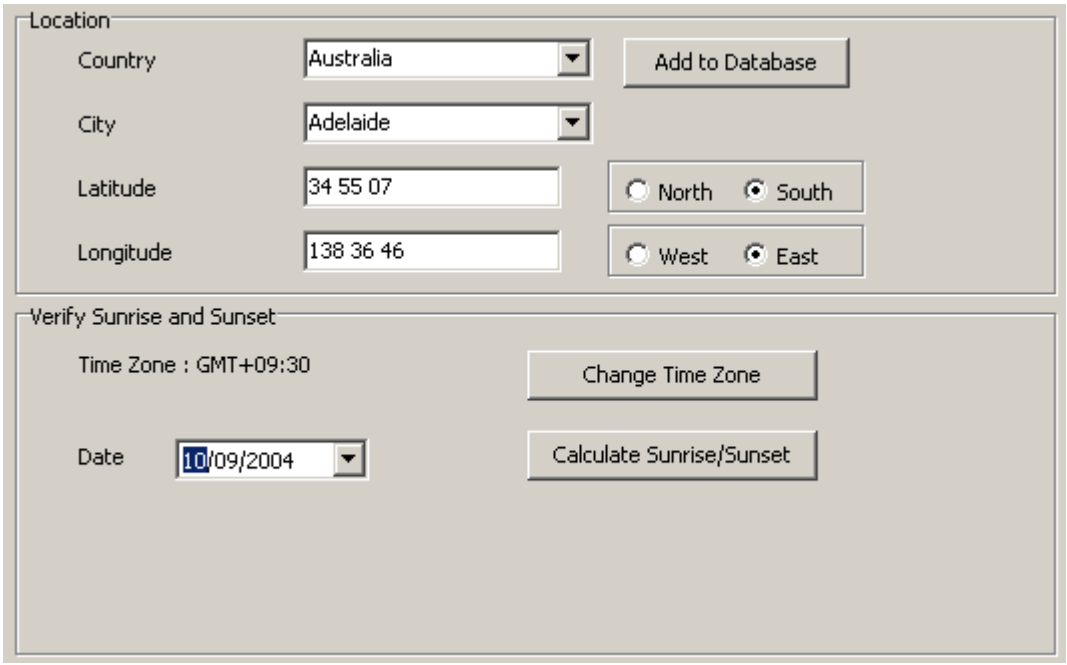
To have all of the Groups in the Scenes controlled, regardless of their level, de-select the **Nudge / Ramp only On Groups in Scenes** check box.

When complete, click on the **Next** button.

7.4.4.8 Location

The **Location** page on the Project Details Wizard dialogue box allows you to select the location of the project installation, which is used for sunrise / sunset calculations. The essential data is the Longitude and Latitude of the installation. The easiest way to select this is to select the Country from the first drop-down list, then the city from the second drop-down list. This will enter the Longitude and Latitude for you.

If the Country and/or City is not in the list(s), then type them in and type in the Longitude and Latitude. If you click on the **Add to Database** button, this city will be added to your database of cities and will be available for the next time you use the software.



To find the Longitude and Latitude of cities, look in an Atlas or one of the many Internet sites such as http://www.heavens-above.com/countries.asp.

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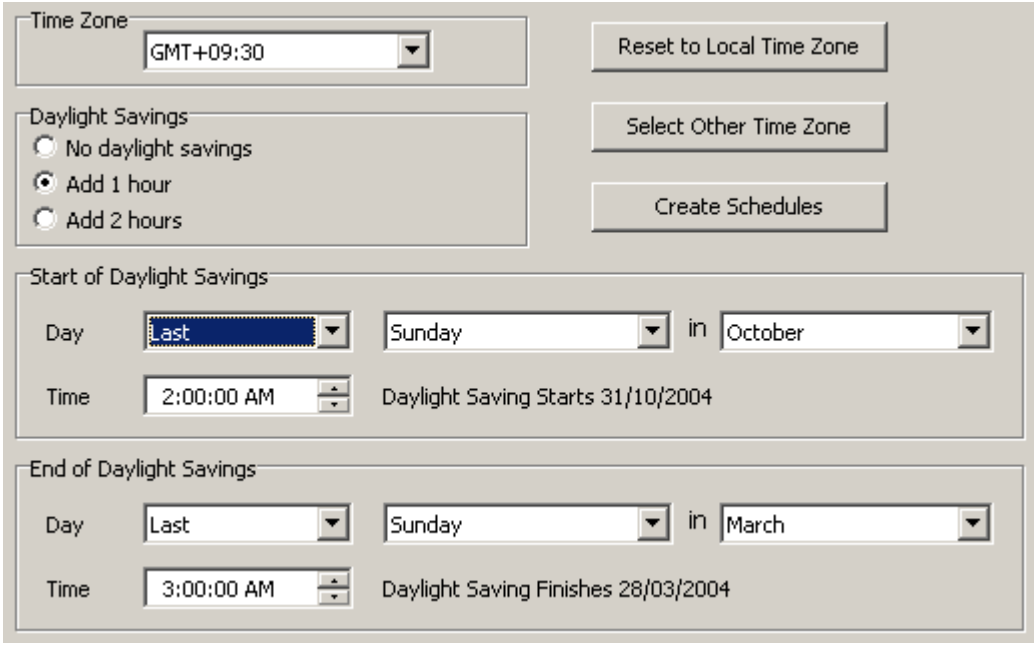
To verify that the data entered is correct, click on the **Calculate Sunrise / Sunset** button and confirm that the data provided is correct. The sunrise and sunset times can usually be found in newspapers or on the Internet.

When complete, click on the **Next** button.

7.4.4.9 Daylight Savings

The **Daylight Savings** tab on the Project Details dialogue box allows you to enter various parameters related to Time zones including :

- The Time zone
- The start date and time of Daylight Savings
- The stop date and time of Daylight Savings
- The amount of time adjustment during Daylight Savings.



By default these will be set to the values set for your computer. To reset these parameters, to the default, click the **Reset to Local Timezone** button.

To select a different time zone, click on the **Select Other Timezone** button.

It should not normally be necessary to manually change any of the parameters on this tab.

When complete, click on the **Finish** button.

7.4.4.10 Timezone Selection

The Daylight Savings page in the Project Details dialogue allows you to enter the time zone and Daylight Savings details. This process is simplified by clicking on the **Select Other Timezone** button on the Project Details **Daylight Savings** Tab. This will open the Timezone Selection dialogue box.

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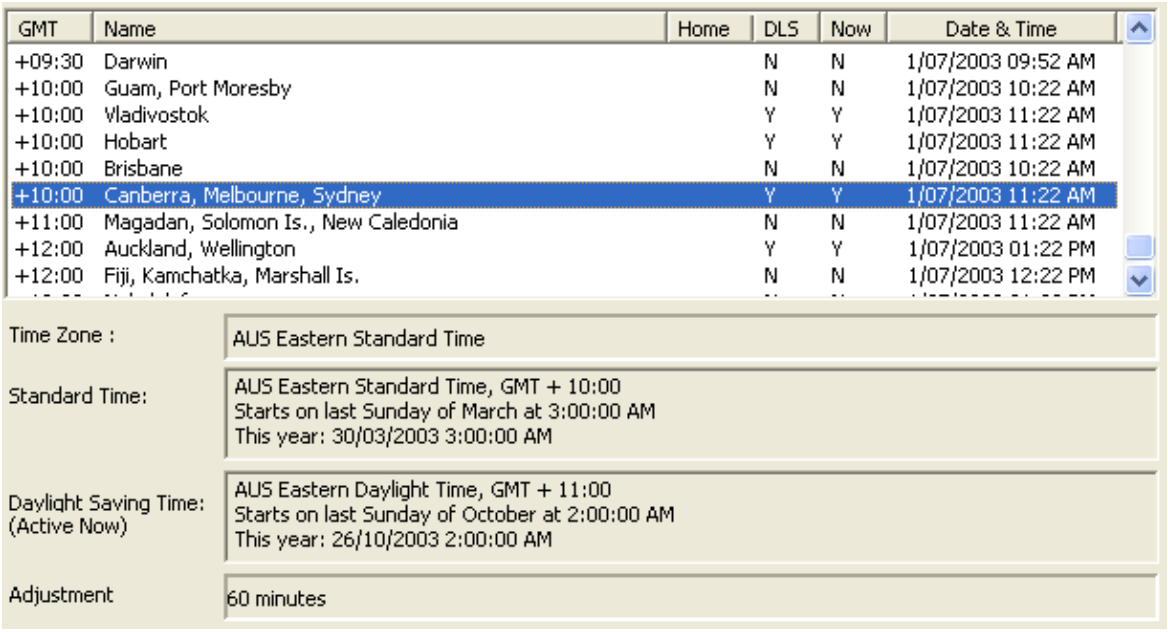
GMT
Name
Home
DLS
Now
Date & Time
+09:30 Darwin N N 1/07/2003 09:52 AM
+10:00 Guam, Port Moresby N N 1/07/2003 10:22 AM
+10:00 Vladivostok Y Y 1/07/2003 11:22 AM
+10:00 Hobart Y Y 1/07/2003 11:22 AM
+10:00 Brisbane N N 1/07/2003 10:22 AM
+10:00 Canberra, Melbourne, Sydney Y Y 1/07/2003 11:22 AM
+11:00 Magadan, Solomon Is., New Caledonia N N 1/07/2003 11:22 AM
+12:00 Auckland, Wellington Y Y 1/07/2003 01:22 PM
+12:00 Fiji, Kamchatka, Marshall Is. N N 1/07/2003 12:22 PM
Time Zone :
AUS Eastern Standard Time
Standard Time:
AUS Eastern Standard Time, GMT + 10:00
Starts on last Sunday of March at 3:00:00 AM
This year: 30/03/2003 3:00:00 AM
Daylight Saving Time:
(Active Now)
AUS Eastern Daylight Time, GMT + 11:00
Starts on last Sunday of October at 2:00:00 AM
This year: 26/10/2003 2:00:00 AM
Adjustment
60 minutes

The Timezone Selection dialogue box allows you to select from an extensive list of time zones supplied by the operating system. There is a list of all Time zones, with the following details :

- **GMT** : offset from GMT (Greenwich Mean Time)
- **Name** : the name of the Timezone
- **Home** : the word "home" is written along side of your home time zone. This can only be changed from the operating system.
- **DLS** : this shows whether Daylight Savings is used in this time zone.
- **Now** : this shows whether Daylight Savings is currently active.
- **Date & Time** : this shows the current data and time in the time zone

When a time zone is selected, the following details are shown at the bottom of the form :

- **Timezone** : this is the name of the selected time zone
- **Standard Time** : this is when Daylight Savings finishes
- **Daylight Savings Time** : this is when Daylight Savings starts
- **Adjustment** : this is how much the clocks are adjusted during Daylight Savings time.

Click on the **OK** button to use the selected time zone for your Project.

Note that the computer timezone can be set using Special Functions. This is the timezone that the computer is in, and will determine when it changes its time for daylight savings. The project timezone must match the computer timezone when the project is installed and running. During development of a project, they may be different (if you are developing a project to run on a computer in a different timezone).

7.4.4.11 Auto Page Creation

The **Create Project Pages** page in the Project Details dialogue allows you to quickly and automatically create a series of pages for your project.

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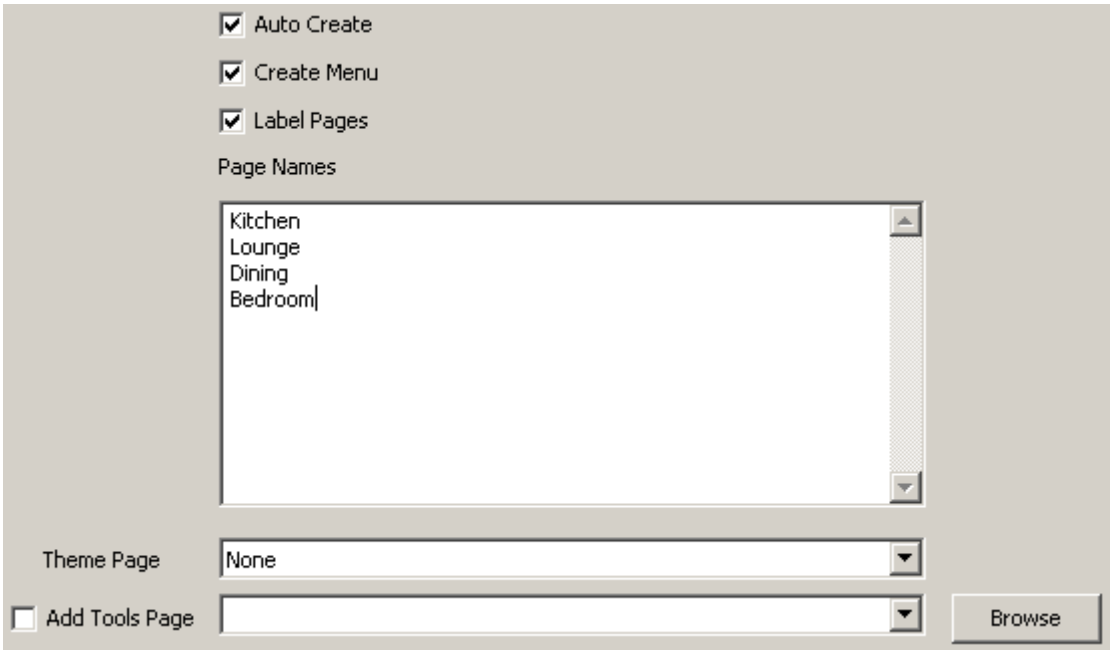

The steps in the process are :

- Select the **Auto Create** button if you want to automatically create pages
- For each page you want to have created, enter the name in the **Page Names** list
- If you want a menu page created with page links to each page, select the **Create Menu** item
- If you want each page labelled with its name, select the **Label Pages** item
- If you want a theme page used for each of your papes, select it from the **Theme Page** list
- If you want to add a tools page, select the **Add Tools Page** button, and select the required tools page from the list, or click the **Browse** button to select a page which is not listed
- Click on the **Finish** button when complete

7.4.5 Saving the Project

To save the project, either click on the **Save** button of the tool bar, or select the **Save** item from the **File** menu. To save the project with a different file name, select **Save As** from the **File** menu and enter the desired name.

If you are saving the project for the first time, or saving with a different file name, you will be prompted to enter a file name. Select the directory where your project will be stored, and enter a file name. The default file extension is **CTD**, which does not need to be entered.
To encrypt the project file to make it secure against tampering, select **Secure Project File (*.cte)** from the **Save As Type** drop down list in the Save As dialogue box.

When you save the project, all associated files (images etc) are copied into the project directory. This is to ensure that all of the necessary files are collected together to prevent any of them from being inadvertently deleted, and to simplify archiving the Project . Once the project has been saved, it will start using the saved files, not the original ones that were selected.

To keep the files for a project together and to prevent them from being confused with files for other projects, it is recommended that you create a separate directory (folder) for each project.

To do this, either

- If you are saving the Project file in the recommended \Projects directory, the Schedule Plus software will ask if you want a separate directory created. This will be created with the same name as the Project if you click on the Yes button; or
- Create a new folder before you start, using Windows Explorer or similar product; or
- When you save for the first time, or select **Save As** from the **File** menu, the **Save File** dialogue

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box will appear. If you click on the **new folder** icon, a new folder will be created. You can then change the name and select the folder.

New Folder Icon :

To save just the currently displayed page to a file, select **Save Page As** from the **File** menu.

Note that when a file is saved, a backup copy is created with the same name, but with a back-up file extension.

To save a project as a template, select the **Save Template** item from the **File** menu.

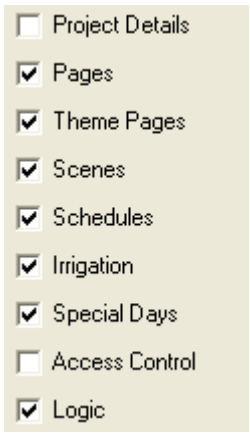
See also Saving a Backup

7.4.6 Templates

Templates can be used to store various aspects of a Project which are used on a regular basis. A Template can store :

- Project Details – all of the information in the Project Details dialogue box.
- Pages, each of which may contain various components
- Theme Pages
- Scenes
- Schedules
- Irrigation Programs
- Special Days
- Access Control

To add a Template page to a project, select the **File | Add Template Contents** menu item, select which parts of the Template you want to import using the Template Options form, click **OK**, select the Template file and click on **OK**. If you have used a particular Template before, you can select it from the **File | Re-Add Template Contents** menu item.



To save a whole Project as a Template, select the **Save As Template** item from the **File** menu, select which parts of the Project you want to have saved in the Template, click on **OK**, enter a File Name and click on **OK**.

To save just the current page as a Template, select the **Save Page As Template** item from the **File** menu, select which parts of the Project you want to have saved in the Template, click on **OK**, enter a File Name and click on **OK**.

To open an existing Template, select **Open Template** item from the **File** menu, select which parts of the Template you want to import, click **OK**, select the Template file and click on **OK**.

Project Templates

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Templates can be used to save the user from having to re-enter the same data each time a new project is started.

To create a project template, follow these steps :

- Create a new Project.
- In the Project Details dialogue box, enter your name and company details.
- In the Project Details dialogue box, enter your location and time zone.
- Create a standard start-up page if you want one.
- Create any other pages that you want to use regularly (you can always delete them later if you don't use them).
- Place any specific components that you regularly use on a page, so that you can copy and paste them later.
- Set up any common Scenes that you may need.
- Set up any common Schedules that you may need.
- Set up any Access Levels that you may need.
- Set up the grid to your preferred setting.
- Set any other preferences.
- Select the **Save As Template** item from the **File** menu and follow the steps described above.

To use a template in the future, select the **Open Template** item from the File menu.

Screen Size

When a template with Pages is saved, the Project screen size is also saved. If you load a template which contains Pages, you have the option to use the template screen size or to keep the screen size of the Project.

If the Template screen size is different from the Project screen size, a warning will be raised. If the template page is larger than the Project screen size, then the template Components will be rearranged so that they fit on the page.

See Tutorial.

7.4.7 Archiving the Project

Archiving consists of collecting together all files related to a Project and compressing them into a single compact file.

When a Project is complete, installed and tested, you should consider archiving the project files. The purpose of archiving the files is so that if (when) you need to make changes at a later date, the files are guaranteed to be available. If you keep the files on your hard disk, and there is a failure, you may lose many hours of work if you have to re-create the project again.

Ideally, a copy of the archive file should be given to the customer for safe keeping.

See also Saving the Project

7.4.7.1 Exporting to an Archive

A new archive is created by the **File | Archive | Export to Archive** menu selection. This starts the Archive Wizard which guides the user through the creation of an archive. The first page of the wizard specifies the project files to archive.

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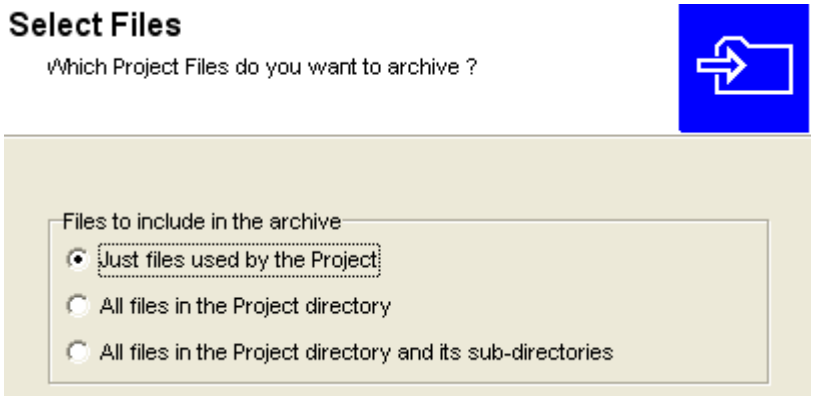
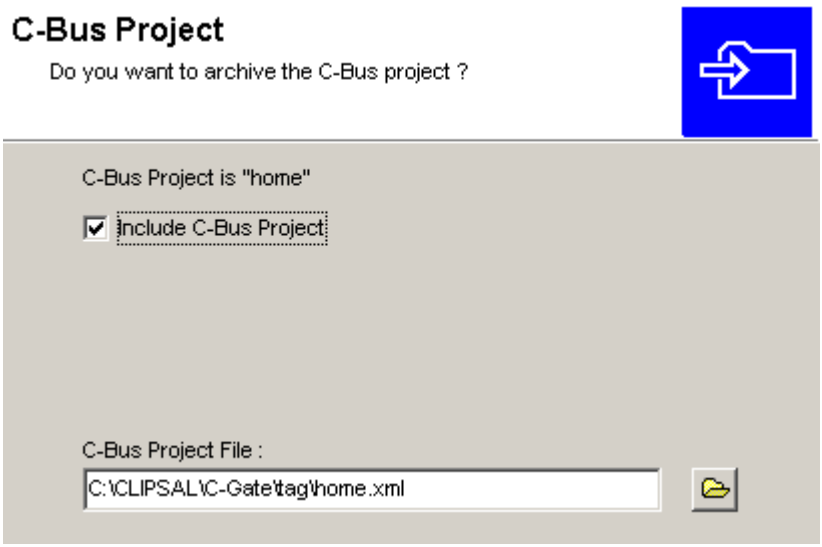

Select Files
Which Project Files do you want to archive ?
Files to include in the archive
Just files used by the Project
All files in the Project directory
All files in the Project directory and its sub-directories

The files specific to the project may be archived. This is a convenient way to extract just the files used by a project from a directory which contains several projects. Alternatively all files in the directory or even those included in subdirectories can be specified.

Click on the **Next** button.

The next dialogue asks for the C-Bus Project used by the Schedule Plus Project.



Select the C-Bus Project file (in the C-Gate\Tag directory) if the dislayed one is incorrect.

Click on the **Next** button.

If you use a non-standard font (i.e. One which does not come with Windows), it would be advisable to save a copy of the font with the project. Copy the fonts to the directory requested by the archive wizard. The font files, which have either a "ttf" or "fon" extension usually reside on the Windows\Fonts directory or the Winnt40\Fonts on some versions of Windows. Normally, these fonts would be those which have been downloaded specially for use in the project.

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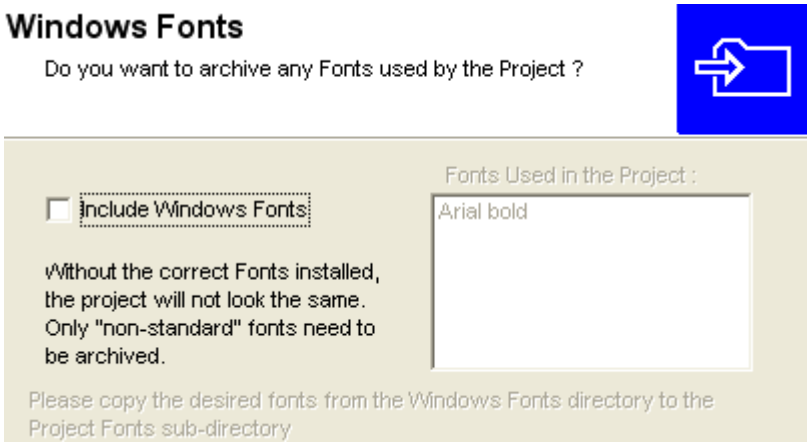
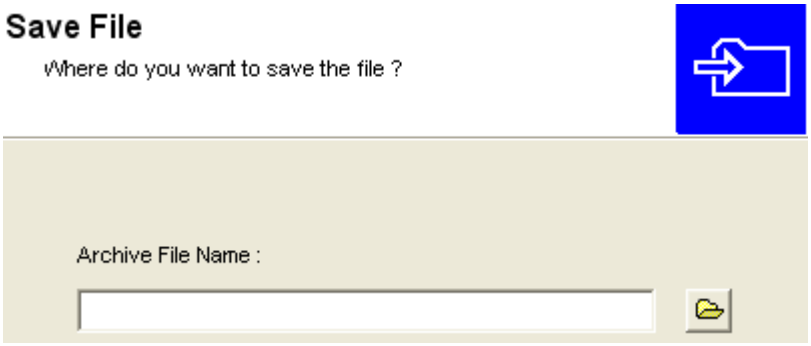

Windows Fonts
Do you want to archive any Fonts used by the Project ?
Include Windows Fonts
Without the correct Fonts installed, the project will not look the same. Only "non-standard" fonts need to be archived.
Fonts Used in the Project :
Arial bold
Please copy the desired fonts from the Windows Fonts directory to the Project Fonts sub-directory

Click on the **Next** button.

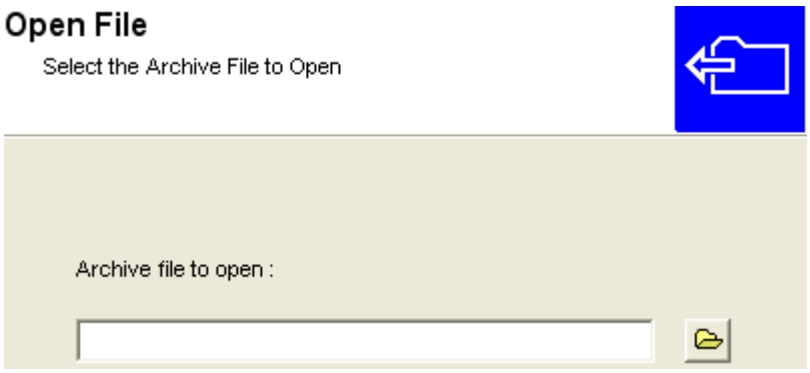
Once all the files have been specified, the archive file is named. The extension for Schedule Plus software archive files is "cta".



Click on the **Finish** button.

7.4.7.2 Importing from an Archive

To open an archive, select the **File | Archive | Import From Archive** menu item. This starts the Import Archive wizard. The first page in the Wizard asks for the archive to load.



Click on the **Next** button.

The restore files page selects where the files will be restored to.

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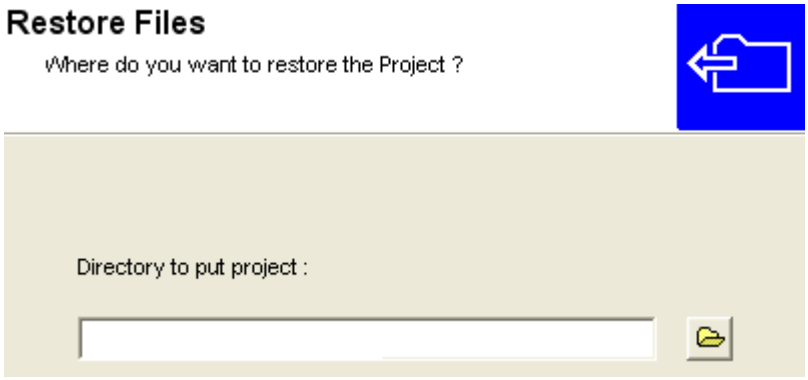
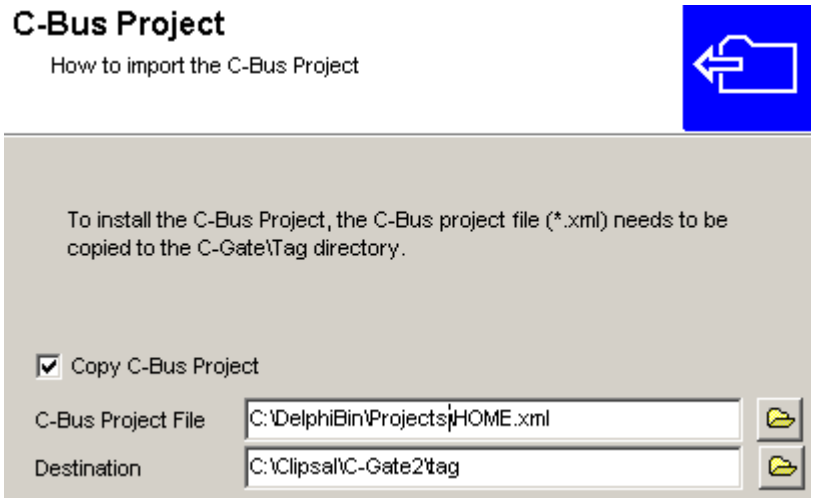


Click on the **Next** button.

The C-Bus Project is imported next. The xml file has to be copied into the C-Gate\tag directory. If the C-Bus Project file or the C-Gate tag directory is incorrect, enter the correct values. If you want to manually copy the tag file later, de-select the **Copy C-Bus Project** check box.


C-Bus Project
How to import the C-Bus Project
To install the C-Bus Project, the C-Bus project file (*.xml) needs to be copied to the C-Gate\Tag directory.
Copy C-Bus Project
C-Bus Project File
C:\DelphiBin\Projects\HOME.xml
Destination
C:\Clipsal\C-Gate2\tag

Click on the **Next** button.

Finally, any fonts which might have been saved are restored to the Project Directory. They then need to be manually copied into the Windows Fonts directory for Windows to use them.

Click on the **Finish** button. The project is restored to the selected directory and the user is offered the option of opening up the newly restored project.

7.4.7.3 Saving a Backup

It can be a good idea to save a backup copy of your Project at various phases of development. This will allow you to go back to a particular version of the Project in case you should change your mind about changes you have made to the Project.

To save a backup of the Project, select the **File | Archive | Save Backup** menu item. This will save a copy of the project with the date and time included in the file name, which guarantees that each backup file will have a unique, identifiable name.

7.4.8 Printing

This software does not support printing directly, but it is quite simple to print out most things that may be of interest.

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To print out any of the following details :
- Project Details (installer, location etc)
- Schedules
- Scenes
- Network, Application and Group Address usage
- Images used
- Access Control details
- Irrigation Control details

create a Project Summary file (it can be set to HTML or plain text in the Project Details) which can then be printed directly.

To print screen shots, save the Screen Image(s). Open the file(s) with an image manipulation program and print from there.

To print the log, open the log file with a suitable program (text editor, spreadsheet or database) and print from there.

To print the details of the Load Monitor, open the Load Monitor data file with a database or spreadsheet program and print from there.

7.4.9 Time-Out

You may wish the software to display a particular page after the Schedule Plus software has not been used for some time. The time-out page and the duration of the time-out period can be set in the Project Details dialogue box. When the time-out period expires, any logged-in user will be logged out and the time-out page will be displayed.

Each Page can also have its time-out duration set independently if required. Pages which allow access to more critical functions should have a shorter time-out set.

7.5 Pages

A page is a set of components that are displayed together. A Project may contain many pages linked together so that user can navigate between them.

See also Good Design Practices

7.5.1 Selecting Pages

To select a particular page, either :
- Select the required page from the drop down list on the tool bar
- If the required page has a link from the current page, activate the component that links to it.
- Use the CTRL + Page Up/Down keys to move forward or back a page

7.5.2 Adding Pages

A project can have multiple pages, each of which contains various components.

To add a new page :
- click on the New Page speed button on the Tool Bar **OR** select the **Page** sub-menu from the **Edit** menu, then select the **New Page** item
- enter the name of the new page
- click on **OK**

To make a copy of a page :
- Select the desired page
- select the **Page** sub-menu from the **Edit** menu, then select the **Duplicate Page** item
- enter the name of the new page
- click on **OK**

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To add a Template page (or pages) with its components to the current project, either
- select the **Add Template Page(s)** item from the **Edit** menu;
- select which parts of the Template you want to load
- select the desired file
- click on **OK**
- if the name of the Template page has already been used, a new one will be assigned

7.5.3 Deleting Pages

To delete a page :
- Select the desired page
- select the **Page** sub-menu from the **Edit** menu, then select the **Delete Page** item
- click on **OK**

All components on the page will be deleted. Any Component page links will be automatically adjusted.

7.5.4 Page Properties

To change the properties of the currently displayed page, either :
- Select the **Page Properties** item from the **Edit** menu; or
- Double click on the page where there are no components

A dialogue box will appear which will enable the user to change :
- The name of the page
- The Access Level for the page
- The Theme for the page
- The background style :
  - Single Colour
  - Colour gradient from left to right (blend between two colours)
  - Colour gradient from top to bottom
  - Centred image (image is drawn in the centre of the window)
  - Tiled image (image is drawn many times to fill the window)
  - Stretched image (image is stretched to fill the window)
- The background colour(s) (if applicable)
- The background image (if applicable)
- The Time-out duration for the page

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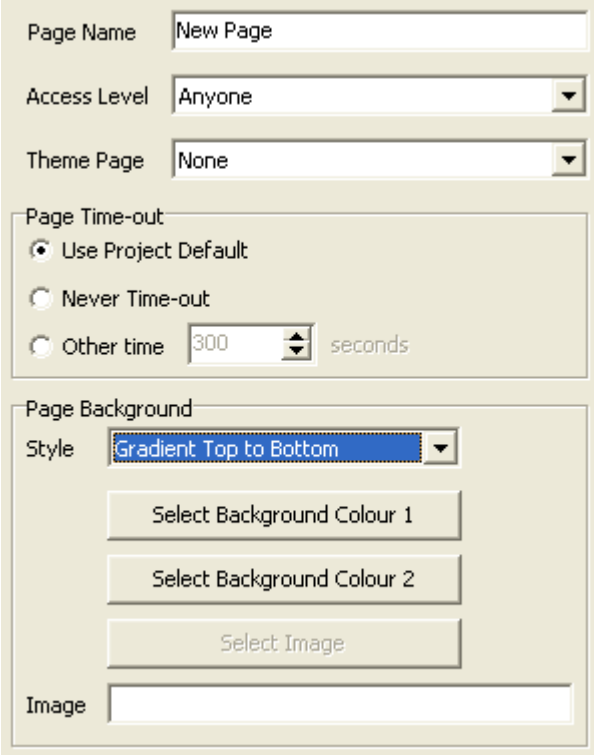

If an Access Level has been set for a page, then when the user tries to select that page, they will have to Log-in to get access to that page.

After a certain time of displaying a page, it will time-out and select the Time-Out page. The Page time-out duration can be set to :

- Project Default - use the time-out duration set in the Project Details
- Never time-out - this is useful if an alarm or message page has been displayed
- Other time - enter the time required

Note :

The Start-up and Time-out page(s) must always have the lowest Access Level, otherwise you will not be able to open a project.

If a Theme is selected, the Page Background settings will be ignored.

7.6 Components

A Component is an item that can be placed on a page. It may be a button, text, image, clock, slider, monitor or other type of component. Components can be used to display information, control C-Bus or to navigate the Project pages.

See also Good Design Practices

7.6.1 Component Actions

When a component is activated, it can perform an action.

The types of Actions which a component can perform include :

- Selecting another page;
- Executing a C-Bus command
- Execute a Special Function; or

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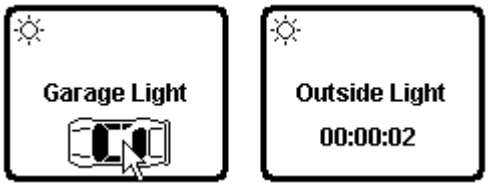
Components do not have to have an Action. They can be used purely for visual effect, or to display some sort of data.

7.6.2 Activating Components

Activating a Components causes it to perform the action which it is intended to do.

To activate a component on the Schedule Plus Software, right mouse click on the component. If Schedule Plus is running on a Touch Panel PC and it is running in Operation Mode, pressing a component with your finger will activate it.

Note that the component which is on top will be the one activated. Any components which have no action when pressed will be ignored when determining which component to activate. For example, in the example below, there is a button controlling C-Bus with an image on top of the button, and another button controlling C-Bus with a C-Bus Timer Display on top.



If the user clicks on the image of the car, then the image will be ignored (assuming that there are no actions associated with it), and the "click" will go through to the component below (the button).

In a similar way, if the user clicks on the C-Bus Timer Display, it too will be ignored because its C-Bus action is "status" and hence it performs no action.

Note that when a Component is activated, its status indicator will change immediately, but there may be a delay in the command being executed on C-Bus.

See also Program Options and Remote Control

7.6.3 Component Types

There are only a few basic types of Components, but they can have their properties set to make them look like there are in fact hundreds of types :

- Text
- Images
- Shapes
- Buttons
- Sliders
- Level Indicators
- Clocks
- Monitors

All components have the following properties in common :

- all components may have an Action
- all components may have their Remote Control properties set
- all components have a Position and Size

7.6.3.1 Text

This displays one or more lines of text. The font can be set. There is no border or background.

Examples :

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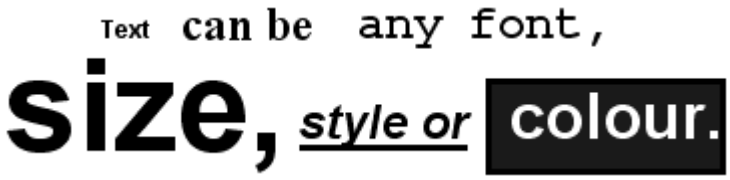


7.6.3.2 Images

An Image Component displays a bitmap, JPEG or WMF image on the page.

A bitmap image can be set to be transparent if desired. In this case, the colour of the bottom left pixel will be used as the transparent colour. Any pixels in the image matching this colour will not be displayed (i.e. will be transparent).

An image has no border or background. When the Project is Saved, all images are copied to the project directory. If an image that is used by the project is deleted or renamed, an error message will be raised and a "dummy" image will be displayed.

The image is limited to the size of the screen.

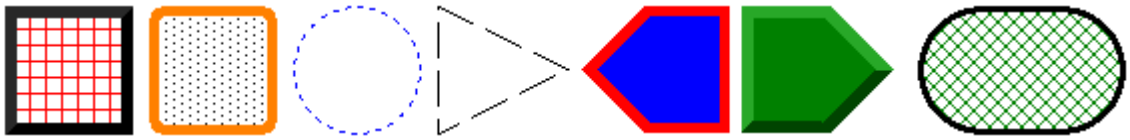
Images can be stretched in the Schedule Plus software, but it may be preferable to use an image manipulation program to perform this before placing the image on a Page.

7.6.3.3 Shapes

A Shape Component has a border and background and nothing else. It can be used for displaying :

- Rectangles
- Horizontal or vertical lines (ie. very narrow rectangles)
- Triangles
- Circles and Ellipses
- Pointers
- Invisible "hot spots: which can be activated

Examples :



Note : when placing a Shape, the border shape can be selected from a drop-down list on the Tool Bar.

7.6.3.4 Buttons

A Button Component consists of a border, background, text and an image. All of these parts can be used to indicate C-Bus status :

- The border and background can change colour according the Group Address level.
- The text words and font can change according the Group Address state.
- The image can toggle between any two images to indicate the Group Address state.

Examples :

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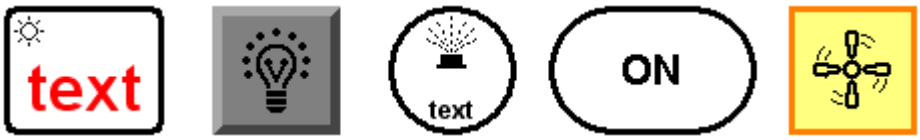


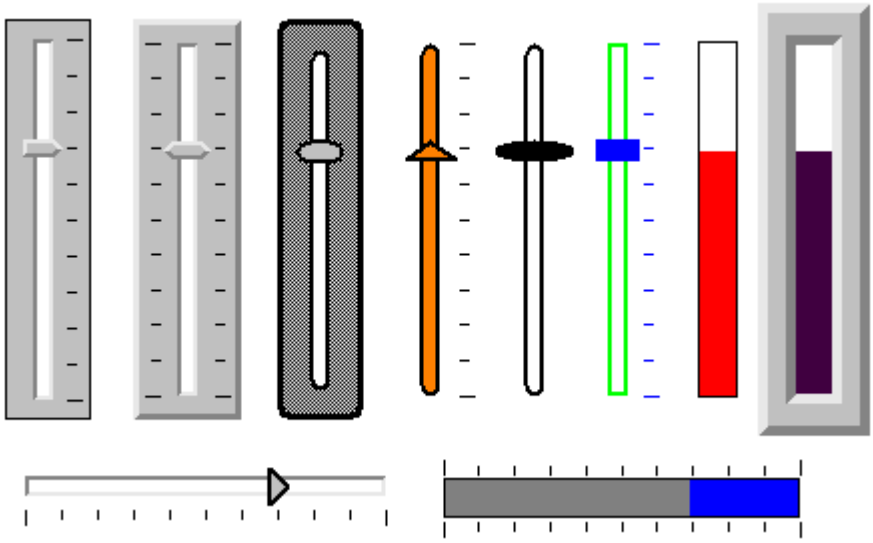
7.6.3.5 Sliders

A Slider Component is used to set or show the precise level of a Group.

A slider can be either a normal slider or a bar graph.

A Slider consists of a border, background, slot, thumb (the bit that slides up and down or left and right) and tick marks (the lines along the side). The Slider thumb is used to set or indicate the C-Bus Level. For example, if the thumb is 80% of the way from the bottom (or left, if it is a horizontal slider), then the Group Address Level is 80%.

Examples :



7.6.3.6 Level Indicators

A Level Indicator Component is used to show the precise level of a group. It has a border and background and can have its text font set.

The options for the level display are :

- as a percentage of full load
- as a Level (0 to 255)
- as an RCS (Room Control System) Temperature (if the Group Address is used to broadcast RCS Temperature)
- as a Tag Description (if there are Level Tags for the Group)

Examples :

7.6.3.7 Clocks

A Clock Component is used to show the time, day of the week and/or date. It has a border and background and can have its text font set. A Clock Component can also display :

- the amount of time remaining on a C-Bus timer
- sunrise time

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- sunset time
- the Irrigation Controller timer
- a Schedule Time

Examples :

7.6.3.8 Monitors

A monitor component is like a gauge that can display the value of some variable. A monitor can be used to display temperature, light levels or voltage. It has a border and background and can have its text font set.

Examples :

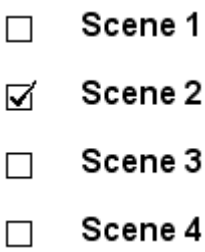
7.6.3.9 Selectors

A Selector component is used to allow the selection of an item from a list, in much the same way as a Windows "Radio Group".

A Selector Component consists of a border, background, text and an image. All of these parts can be used to indicate C-Bus status :

- The border and background can change colour according the Group Address level.
- The text font can change according the selected item.
- The image can toggle between any two images to indicate the selected item.
- The selected item in the list indicates the current Group Address level.

Example :



The first item in the list will be selected when the Group Address Level is 0. The second item will be selected when the level is 1 and so on.

When setting the Selector properties, add one line of Text for each option you want in the list.

7.6.3.10 HTML

An HTML Component consists of a border and an HTML (web) page.

The HTML Component can be used to show any HTML page, including :

- pages on the hard disk (for example, instructions)
- web pages (for example, a weather forecast)
- video camera images

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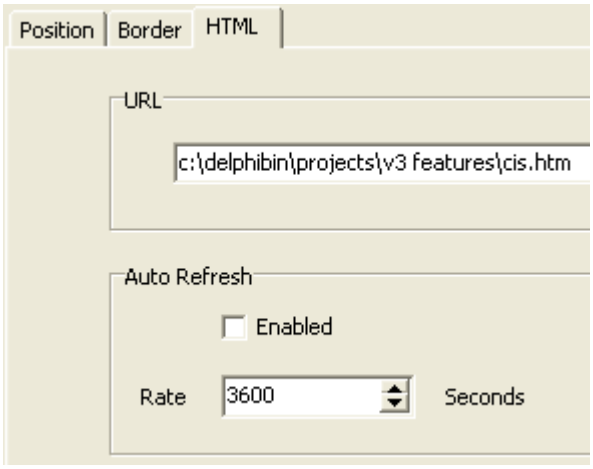
- web based control panels

The properties which can be selected for an HTML Component are :
- Border
- URL (web address)
- Refresh Rate



The refresh rate can be set if the page needs to be refreshed on a regular basis.

The HTML Component is unique in several respects :
- The user can only click on the Border to Select or Manipulate it
- The Background is not drawn by the Schedule Plus software, but by the operating system and is always on top of the Drawing Order
- The background image will not appear if using Internet Access

Note that if an Internet page is to be displayed, the computer running Schedule Plus needs to have an Internet connection. It is recommended that a firewall and virus scanner are used for security.

7.6.4 Component Properties

To change the properties of a particular Component, either :
- Double click on the component; or
- Select the component (by clicking on it) and select the **Component Properties** item in the **Edit** menu.

A dialogue box will appear that will enable the user to change the Component's :
- Physical appearance
- Page Links
- Special Functions
- Remote Control
- C-Bus Properties
- System IO Properties
- Status Indication Options

It is possible to have the Component Properties editor appear automatically when a Component is placed by selecting the option in the Program Options.

See also Good Design Practices

7.6.4.1 Visible Properties

To change the visible properties (physical appearance) of a particular Component, open the Component Properties form then select the **Visible Properties** tab. The options on the **Visible Properties** tab depend upon the type of component, and may include :

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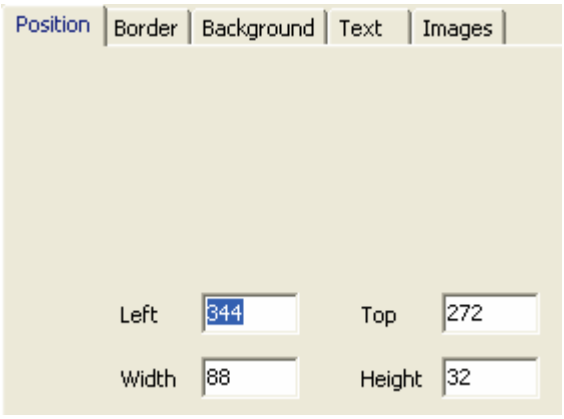
- Position
- Border
- Background
- Text
- Image
- Clocks
- Slider
- Monitor
- Value

7.6.4.1.1 Position

The **Position** tab of the Visible Properties tab allows the size and position of the component to be entered manually. The position is specified by the coordinate of the left and top corner of the rectangle bounding the component and the width and height of the component.

When a triangular, round or oval shaped component is placed on a page, the component is bounded by an imaginary rectangle. The coordinates on this tab refer to this bounding rectangle.



7.6.4.1.2 Border

The border of a component is the shape and style of the outline of the component.

The **Border** tab of the Visible Properties tab allows you to enter the appearance of the border of the component. You can select the following border properties :

- shape (rectangle, ellipse, triangle etc.)
- line style (solid, dotted, raised, lowered etc.)
- border width
- colour
- Alpha Blending

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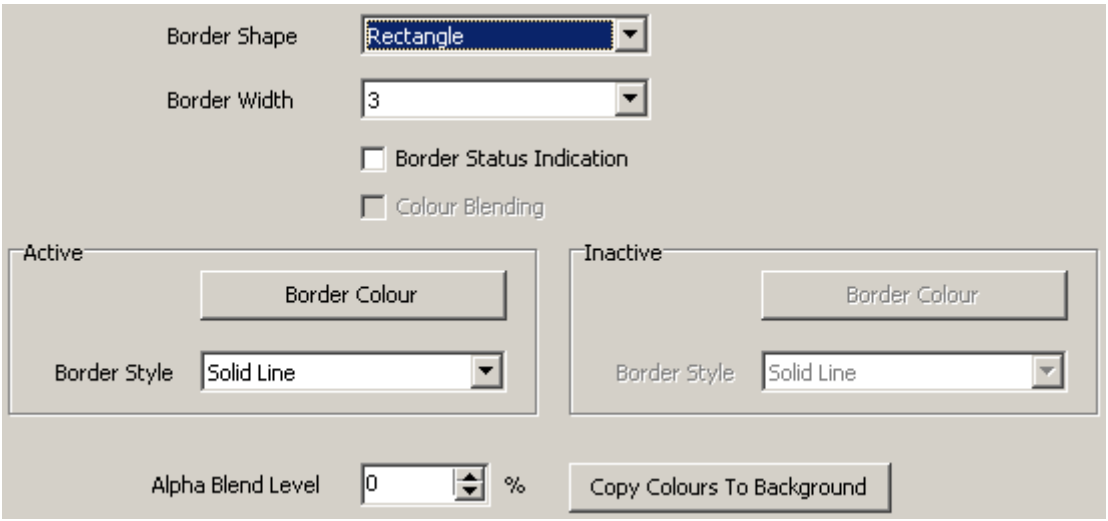

The border shape may be :

- Rectangle
- Rounded Rectangle
- Triangle
- Circle / ellipse
- Pointer
- Capsule
- Polygon
- Star

Some of the possible border shapes are shown below.

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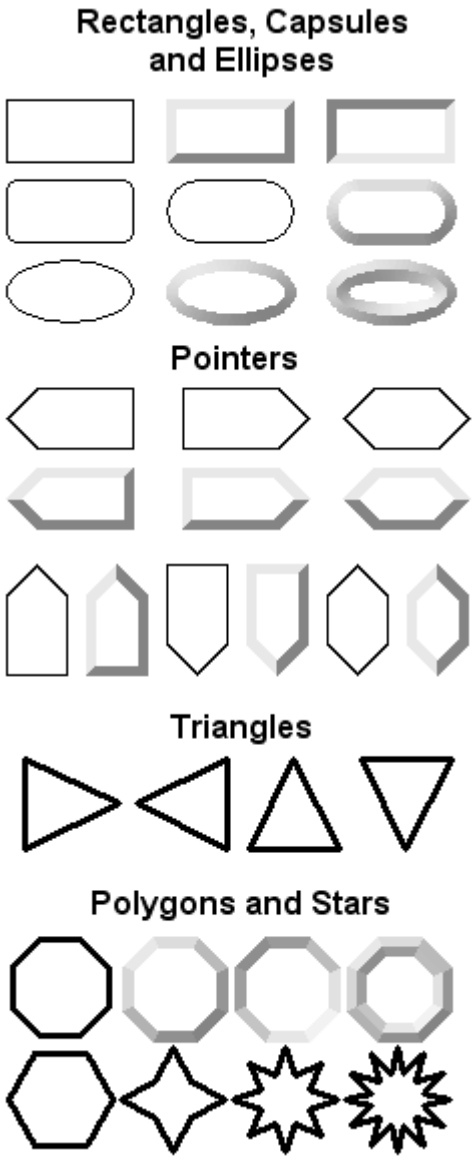
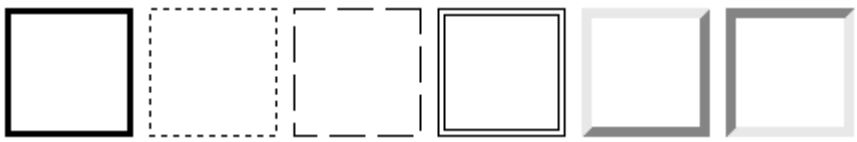


The available border style options depend on the border shape. The options are :

- none (this will make the border transparent, in which case it will not be seen)
- a solid line of different thicknesses
- a dotted line (border width must be 1)
- a dashed line (border width must be 1)
- a double line
- raised
- lowered
- raised edge
- lowered edge

Border Lines Styes are shown below :



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The border Colour can also be selected.

If the border colour or style is to change to show the status of the Component, the **Border Status Indication** check box is ticked and the active and inactive styles and colours are both selected. The colours can be chosen from a palette or specified by hue, saturation and luminance. The colour status indication is selected from a palette in the same way for both the border and the background.

Colour blending is the process of mixing two colours together to yield an intermediate colour. Ticking the **Colour Blending** tick box will allow an indicator or component to display different colours between minimum and maximum. The two endpoint colours must be selected for this to work.

Note that if a colour and the complement of that colour are mixed together the result is a neutral grey. So the combination of blue and yellow, red and cyan or green and magenta will be neutral grey in a 50/50 mix (ie. when the level is at 50%).

Conversely, two colours which are not complements such as red and green (two of the additive primary colours) will yield some kind of colour at all ratios. Hence, for an indicator to show as coloured at all settings the two end points should not be complements of each other.

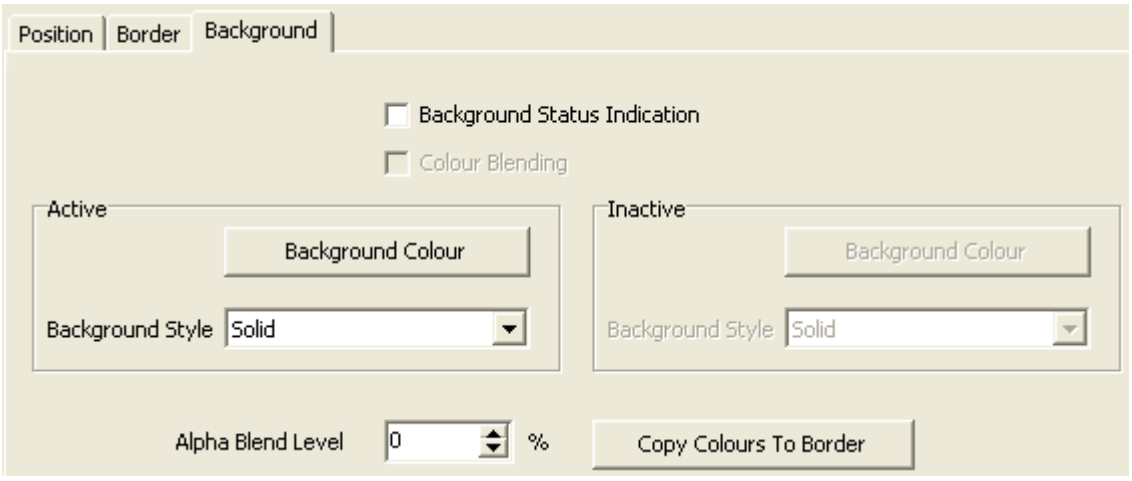
If you click the **Copy Colour To Background** button, the active and inactive Border colours will be copied to the active and inactive Background colours.

7.6.4.1.3 Background

The background of a Component is the style used to "paint" the component inside the border.

The **Background** tab of the Visible Properties tab allows you to enter the appearance of the background of the component. The following properties can be set :

- Background Colour
- Background Style (none, solid, stripes etc)
- Alpha Blending



The background style may be set to :

- None (this will make it transparent)
- Solid (i.e. a plain colour)
- Light Shaded
- Medium Shaded
- Dark Shaded
- Back Diagonal
- Forward Diagonal
- Cross

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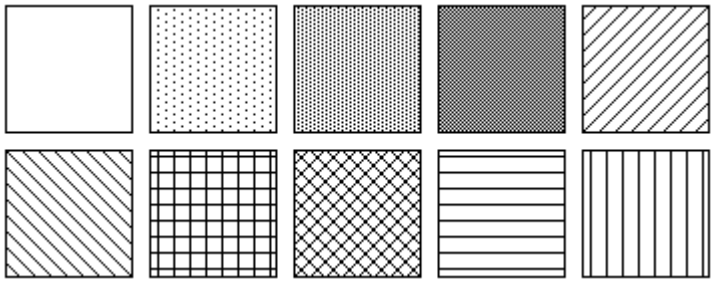
- Diagonal Cross
- Horizontal
- Vertical

Note that if the shading is set to Light, Medium or Dark Shaded, the colour can only be black. For the other shading options, it can be any colour on a transparent background.

The possible background styles are shown below :



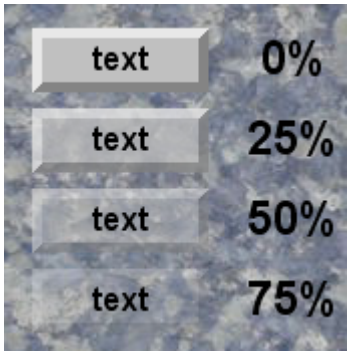
If you wish to have the background style or colour change to show the status of the Component, click on the **Background Status Indication** check box and select both the active and inactive background colours. If the **Colour Blending** option is selected, the colour will change from one colour to the other gradually as the Group Address level changes.

If you click the **Copy Colour To Border** button, the active and inactive Background colours will be copied to the active and inactive Border colours.

7.6.4.1.4 Alpha Blending

Alpha Blending is the process of making something look translucent (ie. you can partly see through it). A component Border and Background can have an amount of alpha blending selected (they both use the same amount).

The amount of blending can be from 0% (all component, no background) to 100% (all background, component is invisible) :



7.6.4.1.5 Text

The **Text** tab of the Visible Properties tab allows you to set the component text, the text alignment (top, left, centre etc) and the text font.

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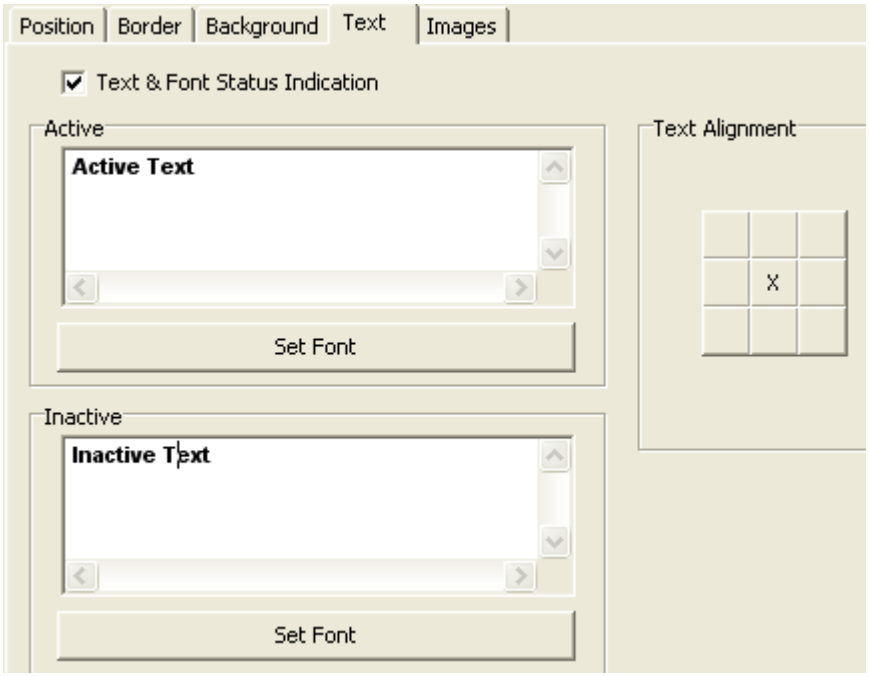

To select the font, click on the **Set Font** button and the Font Selection dialogue will appear.

To set the text alignment (top, left, centre etc), click on one of the Text Alignment buttons.

If you wish to have the text and/or font style change to show the status of the associated C-Bus group address, click on the **Font Status Indication** check box and select the active and inactive text and fonts.

You can insert symbols into the text boxes as follows :
1. Select the required font
2. Select the position where you want the symbol inserted
3. Right click on the text box and select the **Insert Symbol** item
4. The Insert Symbol dialogue will appear.
4. Click on the desired symbols (they will appear at the top of the dialogue box)
5. Click on OK

For Clocks, Level Indicators and Monitors, a sample of the text is displayed. The actual text displayed will depend on the actual value of the data displayed.

7.6.4.1.6 Image

The **Images** tab of the Visible Properties tab allows you to select which image(s) are displayed on a button, Selector or Image component and the image alignment (top, left, centre etc).

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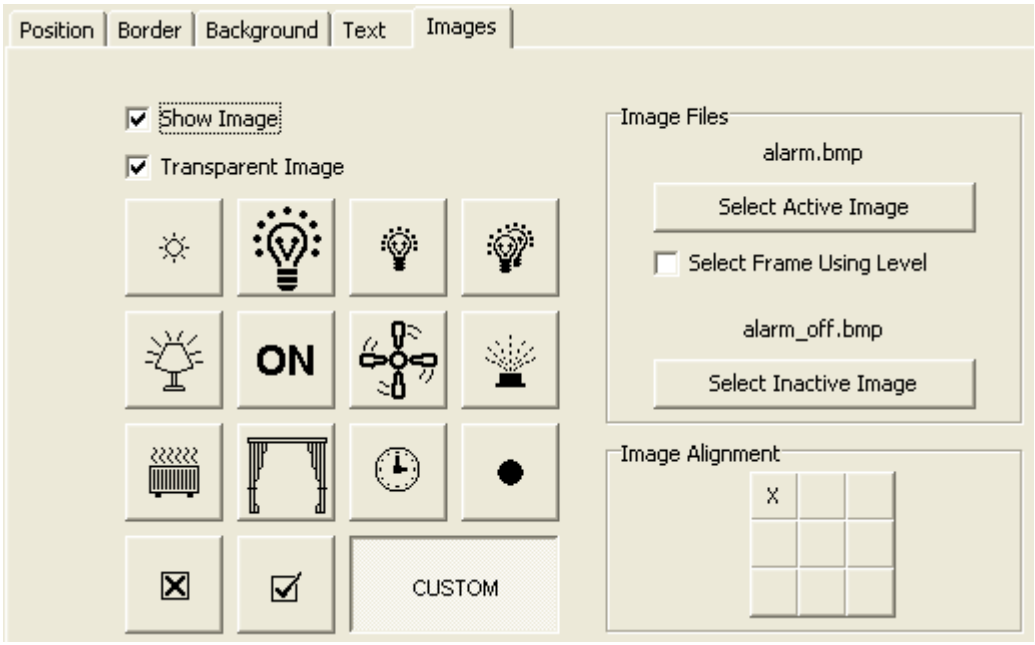

To display an image, select the **Show Image** check box. Either :

- select one of the standard images; or
- click on the **Custom** button and select your own active and inactive images by clicking on the **Select Active Image** and **Select Inactive Image** buttons. A dialogue box will appear, allowing you to select a bitmap, JPEG or WMF image.

A bitmap image can be made transparent by selecting the **Transparent Image** check box. The colour of the bottom left pixel will be used as the transparent colour. Any pixels in the image matching this colour will not be displayed (ie. will be transparent)., A JPEG or WMF image can not be made transparent.

Animated Images

Animated images in the form of bitmap strips can be displayed. A bitmap strip has a seies of "frames" in the bitmap. These get displayed one after the other to give an animation effect. A text file with the same name as the bitmap is used to provide the details of the animation. Refer to the provided sample animated images to get a better understanding of how these work.

Button components can also select a frame of a bitmap depending on the C-Bus level. This allows almost any customised effect to be created to display the level of a C-Bus Group Address. To do this, select an animated image as the Active Image. Select the **Select Frame Using Level** check box. The number of frames in the bitmap will be divided across the range 0 to 255. Hence if there are 10 frames, the first will be shown for levels 0 to 25 (255 / 10), the second from 26 to 51 and so on.

There are various shareware programs available for converting animated GIF images into bitmap strips including Alchemy GIF Animator.

Note that once you load an image into a Project, it will remain the same until it is re-loaded. If you edit the file on disk, you will not see the new image on the screen unless you open the Project again, or use the **Options | Refresh Images** menu item.

7.6.4.1.7 Clock

The **Clock** tab of the Visible Properties tab allows you to set the properties of a clock component.

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There are several options for the time information which will be displayed. The **Time / Date Displayed** drop down list allows the following types to be selected :

- Current Time/Date – this displays the current time and/or date.
- Sunrise Time – this displays today's sunrise time
- Sunset Time – this displays today's sunset time
- Schedule Time – this shows the due time for the schedule in the adjacent drop-down list.
- C-Bus Timer – this shows the remaining time left on the timer for the associated Group Address
- Irrigation Timer – this displays the amount of time left in the current Irrigation Zone (if irrigation is running).
- System IO Time - this displays the value of the associated System IO variable
- Logic Timer Time - this displays the time of the selected Logic Timer

If displaying the current time/date, you can select :

- whether seconds are displayed
- whether 24 hour format is used or AM/PM

If displaying the day of the week, you can select whether the full or abbreviated day name is used

If displaying the date, you can select :

- Date order
  - DD/MM/YY (Day / Month / Year)
  - MM/DD/YY (Month / Day / Year)
  - YY/MM/DD (Year / Month / Day)
- 2 or 4 digit year
- Month number or name
- Whether the separator (/) is used

A sample of the time/date is displayed at the bottom in the format selected.

7.6.4.1.8 Slider

The **Slider** tab of the Visible Properties tab allows you set the appearance of a slider component. A Slider consists of a border, background, slot, thumb (the bit that slides up and down) and tick marks (the lines along the side). The Slider thumb is used to set or indicate the C-Bus Level.

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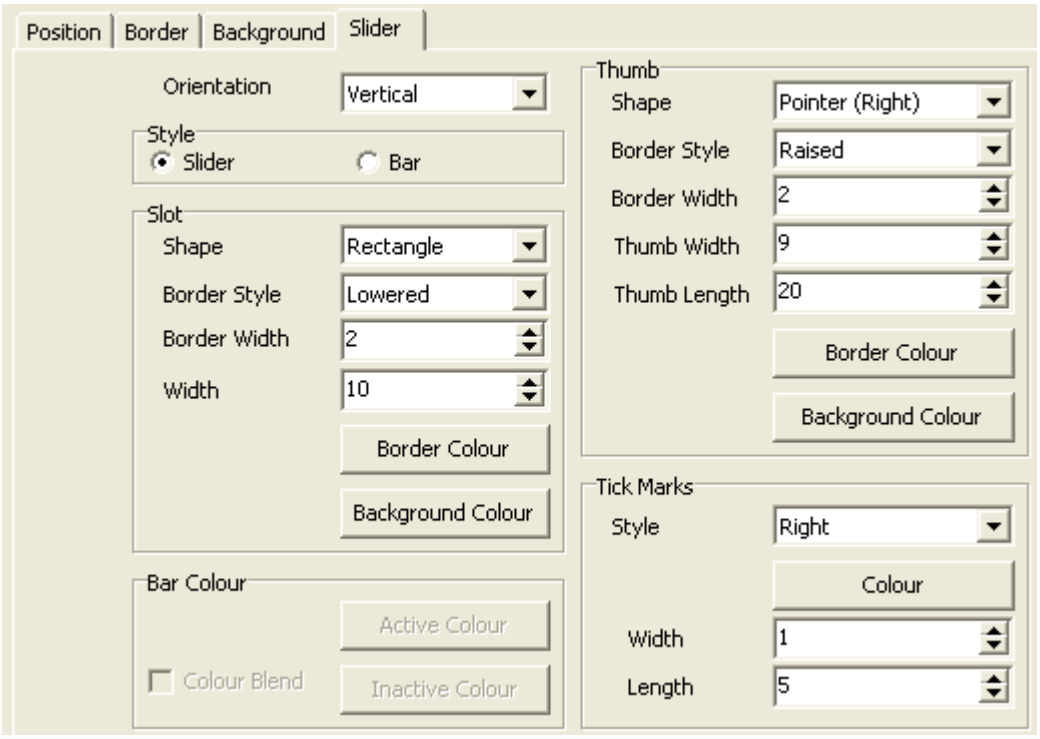

You can set the following slider details :

- Orientation
  - Vertical
  - Horizontal
- Style
  - A **Slider** has a thumb (the bit that slides up and down)
  - A **Bar** has a rectangle of colour to indicate the C-Bus Level.
- Appearance of the slot
  - Shape
  - Border Style
  - Border Width
  - Slot width
  - Border Colour
  - Background Colour
- Appearance of the thumb (if it is a Slider Style)
  - Shape
  - Border Style
  - Border Width
  - Thumb Width
  - Thumb Length
  - Border Colour
  - Background Colour
- The tick marks
  - Style (none, one side or both sides)
  - Colour
  - Width
  - Length
- The Bar Colour (if it is a Bar Style)
  - Active Colour
  - Inactive Colour
  - The colour blending can be used to change the colour of the bar as the C-Bus level changes.

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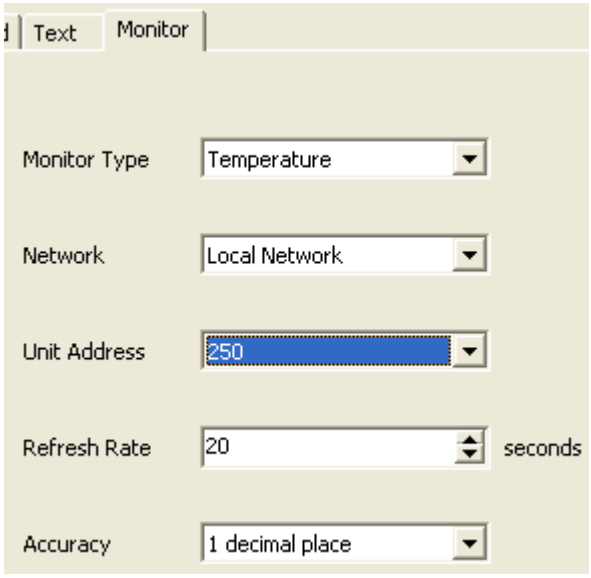
7.6.4.1.9 Monitor

The **Monitor** tab of the Visible Properties tab allows you to set the properties of a Monitor Component.



You must select :

- the type of data displayed (temperature, light level or voltage)
- the Network which the unit is installed on
- the unit address of the C-Bus device that is having its data read (use the C-Bus Tool Kit to determine this)
- the refresh (update) rate
- the data accuracy (precision)

The readings displayed can be updated at different intervals. The time between updates of the display may range from 20 to 255 seconds. A short refresh interval would load the C-Bus Network with commands to a greater extent than a long interval. Unless the information has to be very current, the longer times should be used.

7.6.4.1.10 Value

The **Value** tab of the Visible Properties tab allows you to set the properties of a Level Indicator Component.

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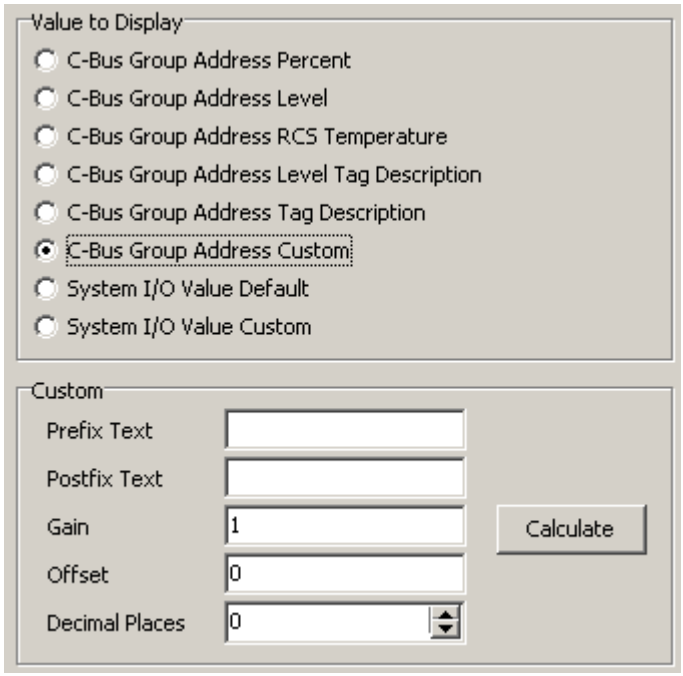

For a Component controlling C-Bus, the options are :

- **C-Bus Group Address Percent** : display Group level as a percentage of full load
- **C-Bus Group Address Level** : display Group level
- **C-Bus Group Address RCS Temperature** : display Group level as an RCS (Room Control System) Temperature (if the Group Address is used to broadcast RCS Temperature)
- **C-Bus Group Address Level Tag Description** : display Group level as a Tag Description (if there are Level Tags for the Group)
- **C-Bus Group Address Tag Description** : display Group tag
- **C-Bus Group Address Custom** : : display Group level as a custom value (see below)

Custom Format

When displaying a value using the custom option, there are several properties which can be selected to control the text displayed :

- **Prefix Text** : this is text displayed before the numerical value
- **Postfix Text** : this is text displayed after the numerical value
- **Gain** : this is used to scale the value displayed (see below)
- **Offset** : this is used to scale the value displayed (see below)
- **Decimal Places** : this controls the accuracy of the number displayed

Value Scaling

Sometimes it is necessary to change the value which is displayed. For example, you may have a temperature sensor connected to an analogue input unit which is broadcasting the value on a Group Address. In these cases, it is necessary to scale the value. There are two parameters which are used to implement the scaling. The "gain" is multiplied by the value and the "offset" is added to the value to get the result which is displayed. For example, with a gain of 2 and an offset of 10, the relationship between the level and the result displayed would be :

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Level	Result = 2 * Level + 10
0	10
1	12
2	14
100	210
255	520

If you do not want to use scaling, have the gain = 1 and the offset = 0.

Calculating Scaling Coefficients

To calculate the necessary gain and offset values, click on the **Calculate** button. Enter the result you want displayed when the C-Bus level is at its minimum and click **OK**. Enter the result you want displayed when the level is at its maximum and click **OK**. The gain and offset will be calculated and placed in the boxes for you.

Alternatively, the scaling coefficients can be calculated by knowing what the result is for two different levels. If the levels are X1 and X2 and the corresponding results are Y1 and Y2 respectively, then

Gain = (Y2 - Y1) / (X2 - X1)

Offset = Y1 - Gain * X1

Note : The Room Control System is an obsolete system for which support has been retained for backwards compatibility.

7.6.4.1.11 Status

The status of a Component refers to whether the function being controlled by the Component is Active (on) or not. The functions which can be indicated by the Component's status include :

- C-Bus Group Address Level (on or off)
- C-Bus Scene state (set or not set)
- C-Bus Timer (running or not running)
- Click (whether the Component is being clicked by the user or not)
- Page Link (whether the page linked to is currently being displayed - useful for Theme Pages with menu bars)

The status of a Component can be displayed by a variety of means, depending on the Component Type :

- Border
- Background
- Images
- Text

To select which function controls the Component's status, select the **Status** tab on the Component Properties dialogue :

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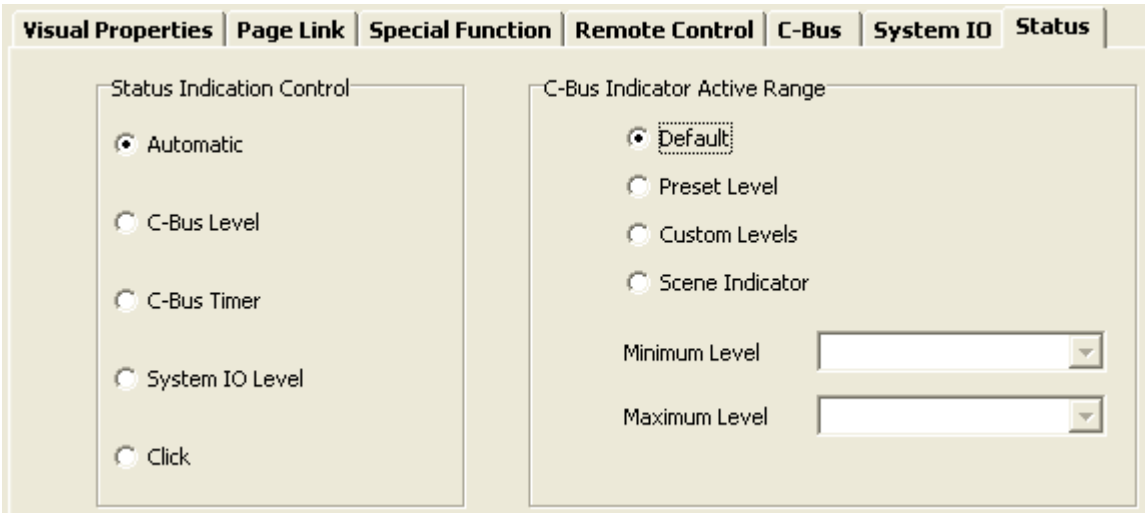

If the Automatic option is selected, then the status will indicate :
- the C-Bus level if the Component controls C-Bus; or
- the System IO level if the Component controls a System IO variable; or
- the click state if the Component controls something else

C-Bus Indicator

The **C-Bus Indicator Range** group of the status tab allows you to select how the C-Bus state indication will be related to the C-Bus Group Address Level.

By default, it will show the Inactive state of the button when the C-Bus level is 0 and the Active state of the button for any other C-Bus level. There are circumstances where this behaviour may need to be changed. The options which are able to be selected are :
- **Default** – when this is selected the default behaviour is used.
- **Preset Level** – when this is selected and the button is a PRESET or STATUS button (see above), the Active state will be shown if the C-Bus level equals the selected level (on the Key Functions Tab), otherwise the Inactive state will be displayed.
- **Custom Levels** – when this is selected, the minimum and maximum levels can be selected for which the Active state will be shown. For all other levels outside of this range, the Inactive state will be shown.
- **Scene Indicator** - when this is selected, the status will show when the Scene is set (ie. the levels of the Group Addresses in the Scene all match the levels of the Scene)

Note : If the Component is controlling the groups in a Scene (other than just setting the Scene), the first Group Address in the scene will be used for showing the status.

7.6.4.2 C-Bus Properties

To set the C-Bus properties of a component :
- Open the Component Properties form
- Select the **C-Bus** tab
- Select the C-Bus type (key function)
- Select the Controlled Item (Scene or Group Address)
- Select the Other Properties (Level, Ramp Rate, Pulse Duration)
- Select the Indicator Functions

Alternatively, the Group Address of one component can be copied to other components as follows :
- Select the component to have its Group Address copied
- Select the other components to have the Group Address copied to
- Select the **Edit | Copy Group** menu item (or use CTRL + G)

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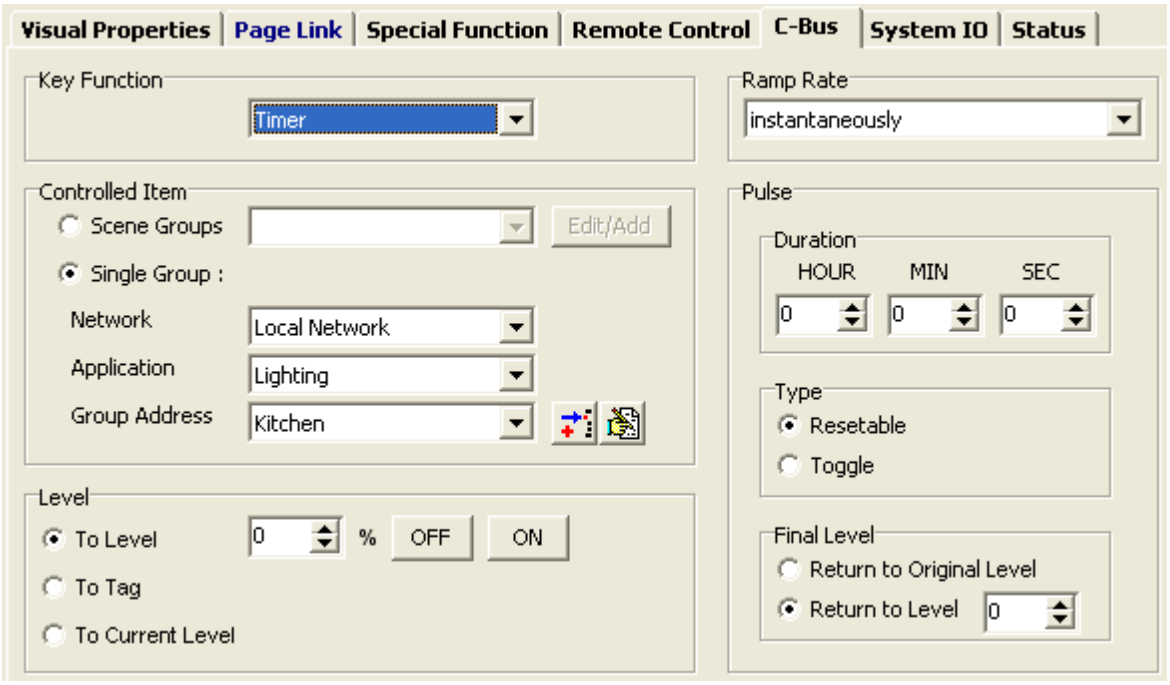
7.6.4.2.1 Key Functions

The **C-Bus** tab allows you to set the C-Bus functionality of the Component.



C-Bus Key Function

The component will behave differently depending on which C-Bus type is selected. The C-Bus component can be set to any of the following types :

- ON : this switches the load on.
- OFF : this switches the load off.
- ON/OFF : this toggles the load on and off. If the load level is greater than 0%, it is regarded as being on.
- DIMMER : a short press will toggle the load on and off. A longer press will dim the load up and down.
- ON/UP : a short press will switch the load on. A longer press will dim the load up.
- OFF/DOWN : a short press will switch the load off. A longer press will dim the load down.
- TIMER : this will switch a load to a particular level for a particular time. When the time expires, the load will return to a specified level. The timer time can be shown with a Clock component.
- PRESET : this will set the load to a preset level (0-100%).
- PRESS : this will set the load to a particular level while the component is being pressed. When the component is released, the load will return to a specified level.
- SCENE : This will set a scene. Note that pressing a scene button for more that 10 seconds will show the Scene Editor dialogue box.
- NUDGE UP : This adjusts the load level up by the amount set in the Level box.
- NUDGE DOWN : This adjusts the load level down by the amount set in the Level box.
- SLIDER : This is used for sliders only.
- STATUS : this will show the C-Bus status, but pressing the component will have no effect.
- UNUSED : this will not show C-Bus status or perform any C-Bus action when pressed.

Note that if C-Bus Remote Control is selected, only the Status option is available.

Controlled Item

If you wish for the Component to adjust all of the Group Addresses in a Scene, select the **Scene Groups** button and select the desired Scene.

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If you wish to control a Single Group Address then :

- Select the **Single Group** button
- Select the network
- Select the Application Number
- Select the Group Address

Level

If the component is to be a preset, press, timer, nudge up or nudge down you will need to select the Level. You can either select a particular level in percent or a tag. If you are connected to C-Bus, you can also use the current level of the Group Address.

Ramp Rate

If the component is to be a preset, press, timer, nudge up or nudge down you will need to select the Ramp Rate. Select a rate at which the Group Address level is to change.

Pulse

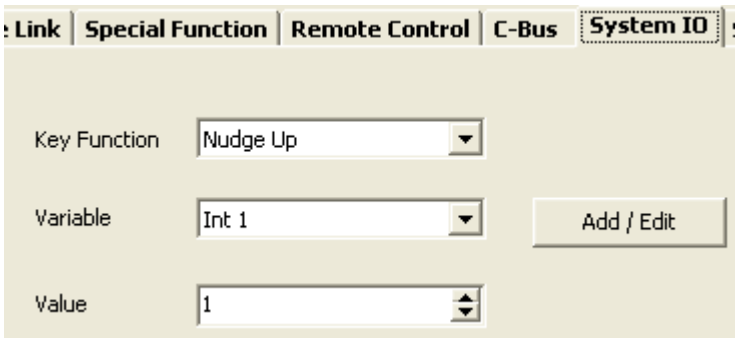
If the component is a timer, you will need to select the timer duration and type. A toggle timer will start when it is pressed, then stop after the time-out period, or if the timer is pressed again before it has timed out. A re-settable timer will start the timer again if pressed before the timer has expired. Note that a clock component can be used to display the amount of time left on a timer.

If the component is a press button or a timer, you need to select the level to which the Group Address is to return to when the press button is released or the timer expires.

7.6.4.3 System IO Properties

System IO variables are used by the Logic Engine to provide monitoring and control of the Logic Engine. A Component can control or monitor a System IO Variable in a similar way to controlling C-Bus.

To change the System IO properties of a particular Component, open the Component Properties form then select the **System IO** tab :



The **Key Function** list allows the function to be selected, with the following options :

- UNUSED : this will not show System IO Variable status or perform any System IO Variable action when pressed.
- ON : this switches the System IO Variable to its maximum value.
- OFF : this switches the System IO Variable to its minimum value.
- ON/OFF : this toggles the System IO Variable between its minimum and maximum value.
- PRESET : this will set the System IO Variable to a preset level.
- NUDGE UP : this adjusts the System IO Variable level up by the amount set in the Value box.
- NUDGE DOWN : This adjusts the System IO Variable level down by the amount set in the

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Value box.
- SLIDER : this is used for System IO Variable sliders only.
- STATUS : this will show the System IO Variable status, but pressing the component will have no effect.
- SELECTOR : this is used for System IO Variable Selectors only.
- BELL PRESS : this sets the System IO Variable to its maximum while the component is held, then sets it to the minimum value when released.
- INCREMENT MONTH : this increments (increases by one) the month (date System I/O only)
- DECREMENT MONTH : this decrements (decreases by one) the month (date System I/O only)
- INCREMENT YEAR : this increments (increases by one) the year (date System I/O only)
- DECREMENT YEAR : this decrements (decreases by one) the year (date System I/O only)

The **Variable** list allows the System IO Variable to be selected.

The **Add / Edit** button allows System IO Variables to be edited or new System IO Variables to be created.

7.6.4.4 Special Functions

When a component is activated, it can cause some "Special Functions" to be executed. Some Special Functions can also be executed by Schedules.

Special Functions include :
- **None** : no Special Function is used
- **Access Control Edit** - Open the Access Control Manager
- **Alarm On** – this starts an alarm
- **Alarm Off** – this stops the alarm
- **Alarm Snooze** – this delays the alarm for a set amount of time
- **Cleaning Mode** - this disables the touch screen so that it can be cleaned
- **Date / Time Set** - Set the computer Date, Time and Timezone
- **Display Properties** - Set the computer Display (screen saver etc)
- **Help Show** - this opens the help file
- **Internet Setup** - Set the computer Internet properties
- **Irrigation Edit** - Open the Irrigation Manager
- **Irrigation, Run Zone** - Run an Irrigation Zone (manual control)
- **Load Monitor Show** - Show Load Monitor
- **Log Show** - Show Log
- **Logic Edit** - show the Logic Editor
- **Log-in** - this shows the log-in page
- **Log-out** - this logs the user out and returns to the start-up page
- **Module Disable** - disable a Logic Module to stop it from running
- **Module Enable** - enable a Logic Module
- **Networking Setup** - Set the computer networking properties
- **Operation Mode Enter** - start Operation Mode
- **Operation Mode Exit** - stop Operation Mode
- **Password Edit** - edit the user password
- **Program Exit** - Exit Program – this closes the Schedule Plus program (can also use **Alt + F4**)
- **Program Minimise** - minimise the Schedule Plus program
- **Program Run** - run a Program
- **Project Save File** - save the Project file
- **Region/language** - Set the computer Region (date/time formats etc)
- **Scene Edit** - If **All Scenes** is selected then the Scene Manager will be opened. If **Specific Scene** is selected, then the selected scene will be opened.
- **Scene Store** - store the current settings for the selected Scene
- **Schedule Edit** - If **All Schedules** is selected then the Schedule Manager will be opened. If **Specific Schedule** is selected, then the selected schedule will be opened.
- **Schedule Synchronise** - Synchronise to Schedules

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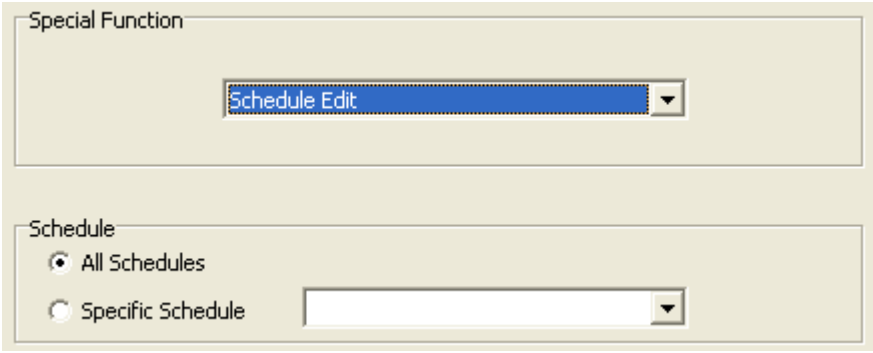
- **Sound Set** - Set the computer Sound
- **Special Day Edit** - Open the Special Days Manager
- **System IO Edit** - if **All System IO** is selected, then the System IO Manager will be opened. If **Specific System IO** is selected then the selected System IO Variable will be opened.
- **System Properties** - Show the computer system information (processor, memory etc)

Note that most Special Functions can not be accessed via the Internet.

To add a Special Function to a component :

- Open the Component Properties form
- Select the **Special Function** tab
- Select the special function from the list
- Enter any other information applicable to that special function (Schedule Number, Scene Number, Irrigation Zone, Program Details, Module Number, System IO Variable)



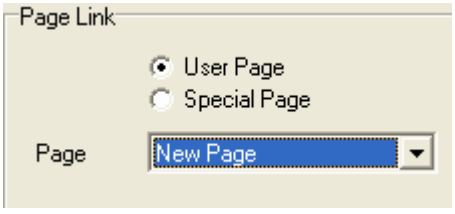
See also Tool Select

7.6.4.5 Page Links

When a component is activated, it can cause another page to be displayed. To do this, a link to the page needs to be added to the component.

To add a link :

- Open the Component Properties form then
- Select the **Page Link** tab page
- Select the destination page from the list



Links can be either to any user created page, or to the previous page. To create a "back" button which takes you back to the previous page :

- select the **Special Page** button
- select the **Back** item in the list

Alternatively, you can use the Tool Select to place a "back" button.

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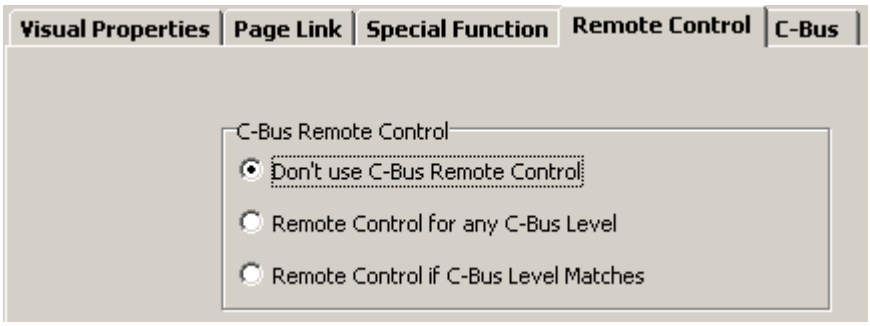
7.6.4.6 Remote Control

A Component can be Activated by means of a C-Bus event.

To do this, open the Component Properties dialogue, and select the **Remote Control** tab :



The C-Bus Group Address to be used to activate the Component is selected on the C-Bus tab of the Component Properties dialogue box.

To activate the component for this Group Address being set to any level, select the **Remote Control for any C-Bus Level** button. To activate the Component only if the Group Address is set to a particular level (as set on the C-Bus Tab), select the **Remote Control if C-Bus Level Matches** button.

Note : if a Component is activated by a C-Bus Group, it can not also be used to control a C-Bus Group.

A component can only be remote controlled if the page it is on is showing. To enable a Component to be remote controlled regardless of which page is showing, place the Component on a Theme Page and use that Theme Page for all of your other pages in the project. This will ensure that the Component is always available without having to copy it to every page.

7.6.4.7 Inserting Symbols in Text

Each Font has many characters (symbols) apart from the letters of the alphabet, and the numbers, such as © µ ¥ etc. Many of these symbols do not have a corresponding key on a standard keyboard.

When editing the text of a component, select the position in the text that you want a symbol inserted. Right click on the text and select the **Insert Symbol** menu item. A dialogue box appears which shows all possible symbols in the currently selected font. Click on the symbols that you want inserted. Click on the **OK** button to insert the selected symbols.

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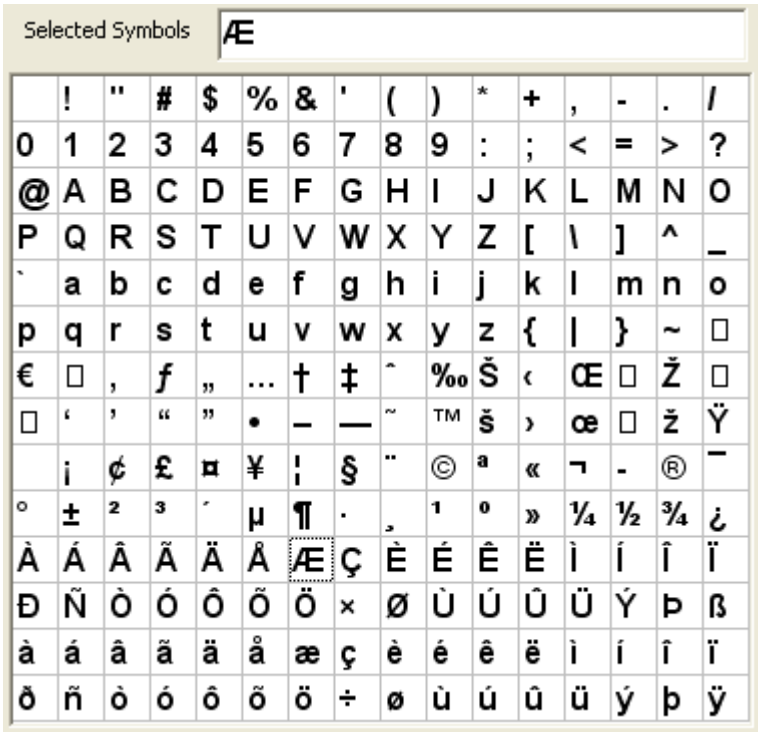
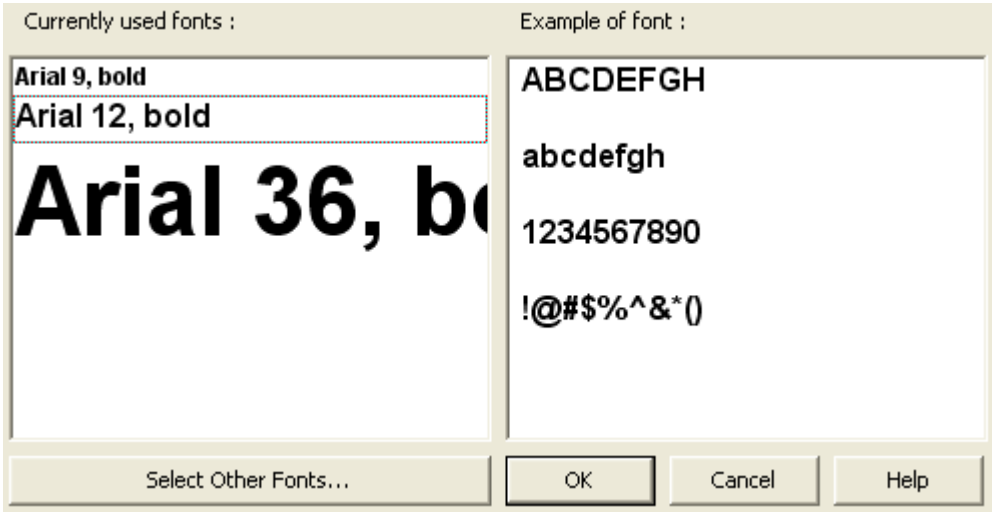


7.6.4.8 Font Selection

Fonts can be selected by means of the Font Selection dialogue box. A list of fonts shows all of the fonts currently used in the project, with the currently selected font highlighted. A sample of the font is also displayed.



To change to another font which is in the list, just click on the desired font. If you wish to use a different font, click on the **Select Other Fonts** button and select the required font.

The default font can be set so that all components which are placed will use this font. To set the default font, select the **Default Font** item from the **Options** Menu or use the button on the tool bar.

NOTES :

The font selection dialogue box is used to minimise the number of different fonts which are used in a project because projects look much better with a minimal number of different fonts used – consistency makes it easier to understand.

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See also Good Design Practices.

7.6.4.9 Colours

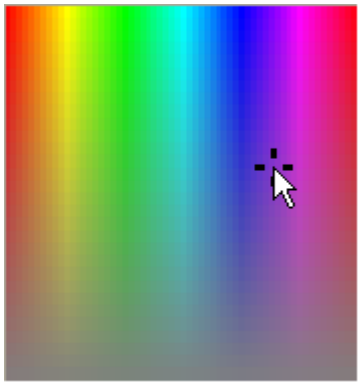
The colour of various things can be set to almost any colour desired :

- Page background colour
- Component background and border
- Slider thumb, slot and tick marks

Colours are selected using the Colour form. You can either select a Basic Colour by clicking on the desired colour or you can select a Custom Colour.

Selecting Custom Colours

Select the shade required by clicking on the colour square :



Then click on the desired intensity for the colour :

Then click on the **Add to Custom Colors** button to add the colour to the **Custom colors** list.

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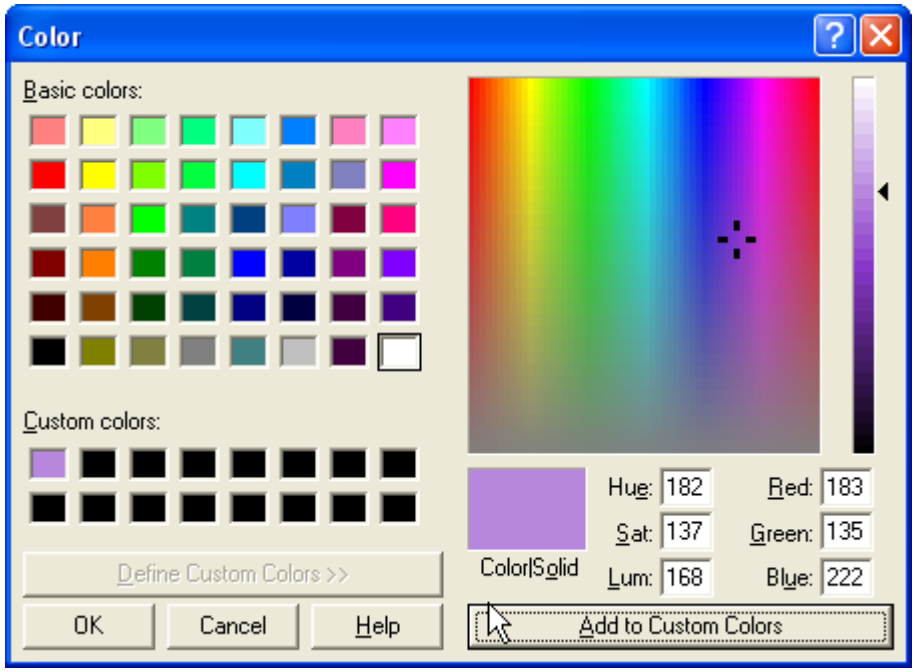

Click on **OK** to use the colour..

To copy a custom colour from one object (component or page) to another, select the first object and open the colour form. The colour will already be in the **Color|Solid** box. Click on the **Add to Custom Colors** button to add the colour to the **Custom colors** list. Open the second thing, and edit the colour. The new custom colour will be there for you to choose.

7.6.5 Adding Components to a Page

Components are items which can be placed on a page and may either :

- be purely visual; or
- respond with some action when activated

There are many component types, each having their own set of features.

To add components to a page :

- Select the required page
- Click on the required component on the tool bar **OR** select the required component from the **Edit | Place** menu.
- Click on the page where the component is required. If the component is a button or shape, click and drag to set the size required.
- Edit the component properties if required.

It is possible to have the Component Properties editor appear automatically when a Component is placed by selecting the option in the Program Options.

See also component manipulation, Good Design Practices and Keyboard Shortcuts

7.6.5.1 Tool Select

If you wish to place a component with a Special Function, you can select the **Edit | Place Component | Tools** menu item or select the **Tools** button on the Tool Bar. You will be able to select a button with the desired properties from the drop down list. Click on the **OK** button, then click on the screen where you want the button placed.

The Components which can be placed are :

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- **Back** - Back Page button
- **Exit Operation Mode** - Exit Operation Mode
- **Hyperlink** - add a Hyperlink
- **Irrigation Rain Delay** - open the Irrigation Rain Delay Schedule
- **Edit Irrigation** - open the Irrigation Manager
- **Edit Special Days** - open the Special Day Manager
- **Edit Scenes** - open the Scene Manager
- **Edit Schedules** - open the Schedule Manager
- **Set Date/Time** - set the computer date and time
- **Log-in** - show the page for entering the user password
- **Log-out** - log the user out and display the start-up page

The same end result can be selected by placing a component on a page, then setting its properties.

7.6.6 Manipulating Components

Before a Component can be manipulated, it must be selected. If you are wanting to manipulate several components at once, select the required components first, then manipulate them together.

Components may be manipulated in the following ways :

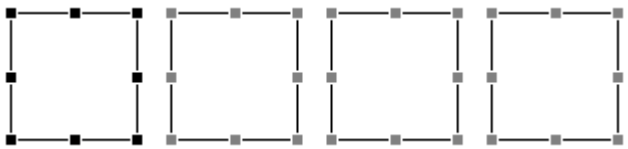
- Moved
- Stretched
- Copied
- Deleted
- Painted

Most of the above functions can also be accessed from the Tool Bars.

7.6.6.1 Component Selection

Before a Component can be manipulated, it must be selected by clicking on it with the left mouse button. You will see the component highlighted with black dots at the corners and sides. Clicking outside of the component will de-select it.

If you are wanting to manipulate several components at once, select the first component by clicking on it. Hold down the CTRL key while you select subsequent components. Clicking on a component a second time will deselect it. You will notice that subsequently selected components have grey dots rather than black ones. The component with the black dots is known as the primary selection, the others are secondary selections. They are treated slightly differently for some actions.



To select all components in an area, hold down the Shift key, then click with the left mouse button and drag around the area of the components that you wish to select. If the Primary Selection component is important, select that first (by clicking on it), then select the area.

You can also select all of the components by using the **Select All** speed button or selecting the **Select All** item from the **Select** menu in the **Edit** menu.

Multiple components can be de-selected by selecting the **Deselect All** item from the **Select** menu in the **Edit** menu or by clicking somewhere outside of all of the selected components.

To select a hidden component, select the **Select Hidden Components** item from the **Select** menu in the **Edit** menu.

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To select a particular component number, select the **Select Component No** item from the **Select** menu in the **Edit** menu.

See also Component Manipulation.

7.6.6.2 Moving Components

To move one or more Components, select them, then move by dragging them with the mouse or using the CTRL + Arrow Keys. If you have selected more than one Component, you can click on any of them to drag the entire group. While you are moving the components, you will see an outline of where they will be placed.

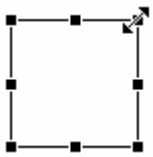
If you are unable to move Components, it may be because the Components are Locked.

7.6.6.3 Component Size

The size of Components can be set in several ways.

Some components can have their size set as they are placed. When placing these components, click on the screen where you want one corner to be, drag to where you want the diagonally opposite corner to be and release the mouse button.

After a component has been placed, you can select it and adjust the size by placing the cursor over one of the selection dots. The cursor will change to show which way the size will be adjusted (left-right, up-down or diagonally) :



Click on the dot and drag to the required size. Release the mouse button when the size is right.

A component's size can also be adjusted precisely by editing it and typing in the required size.

To change the size of components to match the size of another component, select the component that you want the others to match (the primary selection). Then select the other component(s) - these are the secondary selections. The height, width or both can be set by either clicking the size speed buttons on the tool bar or selecting the **Edit | Size** menu, then selecting **Height**, **Width** or **Both**.

Some components have a minimum size. If you try to set the size too small, it will be automatically adjusted.

If you are unable to resize Components, it may be because the Components are Locked.

See also grid.

7.6.6.4 Copying and Deleting Components

To copy one or more Components, select them then :
- click on the **copy** item from the **edit** menu;
- click on the **copy** speed button on the Edit Tool Bar; or
- press **CTRL + C**

To cut one or more components, select them then :
- click on the **cut** item from the **edit** menu;
- click on the **cut** speed button on the Edit Tool Bar; or

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- press **CTRL + X**

To paste the copied/cut Component(s) :
- Select the Page where you want the new Components to be
- click on the **paste** item from the **edit** menu; or
- click on the **paste** speed button on the Edit Tool Bar; or
- press **CTRL + V**

The new Component(s) will be placed next to the copied/cut one. If you changed pages before pasting, it will appear in the same position as the copied/cut Component(s), but on the new page.

To delete one or more components, select them then :
- click on the **delete** item from the **edit** menu;
- click on the **delete** speed button on the Edit Tool Bar; or
- press the **delete** key

7.6.6.5 Paint Format

Once the format of a Component has been set to achieve some kind of visual effect, the format itself may be copied to other similar Components in the project. This is called "Painting Format".

The Paint Format will copy the format (border and background styles) of the copied component to the second one. If the copied component is the same type as the painted component(s), more than just the border and background will be painted, depending upon the component type.

To paint the format of one or more Components :
- Copy a component with the desired format
- Select the component(s) to be changed
- Click on the **paint format** item from the **edit** menu; or
- Click on the **paint format** speed button on the Edit Tool Bar; or
- Press **CTRL + F**

7.6.6.6 Component Order

Components are drawn on the page in the order in which they are placed. Sometime it is desirable to change the order so that a particular component will be drawn behind another one, for example. To change the order in which components are drawn :
- Select the component which is to change
- Select the **Order** menu from the **Edit** menu, and select
  - Move Back
  - Move to Back
  - Move Forward
  - Move to Front; **or**
- Select one of the order speed buttons on the tool bar.

Note that the component that is on top will be the one activated when clicked. Any components which have no action when clicked will be ignored when determining which component was activated.

7.6.6.7 Component Alignment

Components are drawn on the page where they are placed. Sometime it is desirable to move one or more components so that they line up with each other or with the page outline. To change the component alignment :
- Select the component(s) which you want to change
- Select the **Align** menu item from the **Edit** menu or click on the **Align** speed button on the tool bar
- Select the required actions in the Component Alignment dialogue box (see below)
- Click on **OK**

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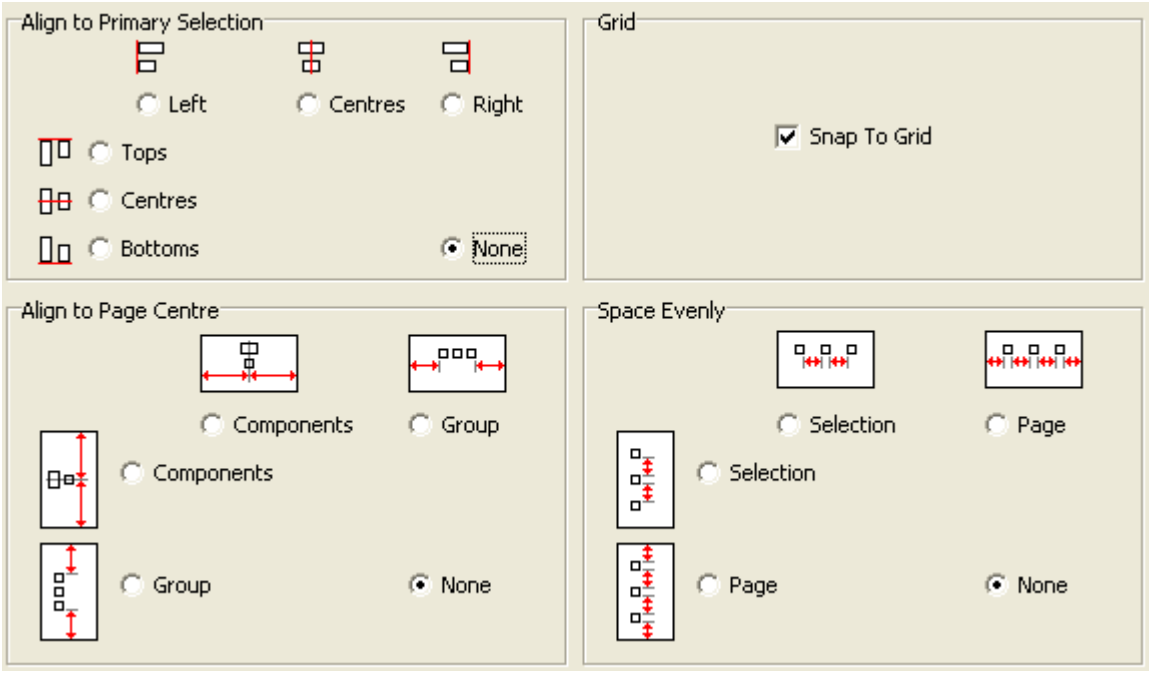

If one or more Components are aligned with respect to another Component, the Primary Selection is the one that the others will be aligned to.

Alignments can be made in several ways :

- Secondary selections can be aligned with respect to the primary selection horizontally or vertically
- Components may be aligned to the centre of the page, either individually or as a group, horizontally or vertically
- Components can be spaced evenly, either within the group or across the page, horizontally or vertically

It is not possible to do more than one type of alignment at a time, as this may give unpredictable results.

If the **Align to Grid** check box is selected, all of the selected components will be placed on the grid.

It is also possible to align the left, top, right or bottom sides of selected components by means of the **Edit | Align** menu items or by the Keyboard Shortcuts.

7.6.6.8 Lock Components

The **Lock Components** item in the **Edit** menu can be used to prevent the Components on the Pages from being moved or re-sized. If they are locked, they can still be selected and edited.

7.6.7 Running Programs

When a component is activated, it can cause some Special Functions to be executed. One of the Special Functions available is to run a program, or open a file. The types of things you may want to do include :

- Running a program such as a calculator, e-mail, web browser etc
- Opening a document or spreadsheet
- Opening a hyperlink (web page)
- Playing a sound (WAV File) or a video
- Running a batch file

On the Special Functions tab, when the **Run Program** option is selected, there are two boxes to enter data :

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- Program or File : This is the program to be run or the file or folder to be opened
- Parameters : These are any parameters for the program (this is optional)

Notes :

If a program is entered in the **Program or File** edit box then the program will be opened. If you wish to open a file with the program, enter the file name in the **Parameters** edit box.

If there is a file in the **Program or File** edit box, the default program used for the particular file type will be used. To view or change the program associated with a particular file type for your PC (with Windows 95 / 98), open **My Computer**, select the **View | Folder Options** menu item, and select the **File Types** tab.

WAV files are handled directly if there is no program (such as the Windows Multi-media player) selected. This makes the playing of sounds much quicker.

If the program is in the Windows search path, then it will not be necessary to include the full path.

The files selected will be copied to the project directory when it is saved.

If the path to a program or file contains spaces, it may be necessary to enclose the path and executable name within double quotes (eg. "C:\Program Files\Internet Explorer\IEXPLORE.EXE").

If you are having problems getting the selected program to run, it is recommended that you test that you have the details correct. From the Windows **Start** menu, select **Run**. Copy the data from the **Program or File** and **Parameters** edit boxes into edit box on the Windows Run form and click on the **OK** button.

It is not possible to run programs in projects when accessing them via the internet.

Examples :

To run the Windows calculator :
- Program or File : c:\windows\calc.exe
- Parameters :

To open the c:\temp folder :
- Program or File : c:\temp
- Parameters :

To Play a sound file c:\SoundFiles\test.wav :
- Program or File : c:\SoundFiles\test.wav
- Parameters :

To open the www.clipsal.com.au/cis web site with the default browser :
- Program or File : http://www.clipsal.com.au/cis
- Parameters :

To run the Windows Paint Program and open the file c:\Images\test.bmp :
- Program or File : c:\windows\pbrush.exe
- Parameters : c:\Images\test.bmp

See also Tool Select

7.6.8 Grid

It can be difficult to get Components to line up exactly when they are placed onto a Page. To make this easier, the components are placed on a "grid" which is set by default to be every 8 pixels. This

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means that a component can only be placed every 8 pixels, making them easier to line up. When dragging a component, you will see it jump from one grid point to the next, so that the top left corner is always on a grid point.

The grid can be set to between 1 and 32 pixels by selecting the **Grid** sub-menu from the **Options** menu and selecting the required value.

There are two other options under this menu. The **Snap Size to Grid** makes the size a multiple of the grid, rather than having the bottom right corner of the component actually on the grid.

The **Snap All To Grid** item puts all components on the page back on the grid. This is used if you have changed the grid size.

7.6.9 Undo

The **undo** function takes the project back to a previous state. If operations are carried out (creating a component, moving a component re sizing etc) then by successive application of the undo action, the project can be returned to the state before those operations were performed. A maximum of six operations can be "undone".

To undo your last action :
- select the **Undo** item from the **Edit** menu
- click on the **Undo** speed button on the Tool Bar

The **Undo** item in the **Edit** menu shows what action will be undone.

7.7 Themes

Themes can be used to make the pages and components have the same style. This helps to produce attractive and usable Projects simply.

A Theme consists of a series of Theme Pages which contain the "templates" to be used for the Pages and Components in the Project.

For example, you may wish to have a particular background colour and some images for all of the Pages in your Project. By placing these on a Theme Page, they can easily be used by all of the other Pages in your project. If you decide to change the look of the Project, you can just change the Theme Page, and all of the other Pages in the Project using this Theme Page will automatically change to the new Theme.

To create a Theme :
- Create one or more Theme Pages
- On the first Theme Page, add any Theme Components required
- On the second and subsequent pages, add any Components to give the desired appearance
- On the Project Pages, select the Page Theme

7.7.1 Theme Components

When a Component is placed on a Page, it has a default appearance. This appearance can be edited to make it look however you want. It is more convenient to have the Components have the correct style when they are first placed, rather than having to change them afterwards. To achieve this, you can set some Theme Components with the styles that you wish to have.

The process is :
- Create one or more Theme Pages
- On the **first** of the Theme Pages (the Theme Components Page), place the Components you wish to use in your theme (one of each type)
- Edit the Components on the Theme Components Page to achieve the desired appearance
- Every time you place a new Component, it will take on the appearance of the corresponding Theme Component

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When a component is placed by clicking and icon on the Tool Bar, if there is a corresponding Theme Component, then it will be placed. If not, then the default one will be placed. The component chosen from the theme components page, depends on which type of component is being placed :

- **Text** : the first text Component on the Components Theme Page
- **Shape** :
  - if placing a shape with a flat border, then it will be the first flat Shape Component on the Components Theme Page
  - if placing a shape with a 3D border, then it will be the first 3D Shape Component on the Components Theme Page
- **C-Bus Button** : the first Button Component on the Components Theme Page which has a C-Bus type set
- **Text Button** : the first Button Component on the Components Theme Page which does not have a C-Bus type set
- **Level** : the first Level Component on the Components Theme Page
- **Indicator** : the first Shape Component on the Components Theme Page which has a C-Bus type set
- **Clock** : the first Clock Component on the Components Theme Page
- **Slider** : the first Slider Component on the Components Theme Page which is a Slider type
- **Bar Graph** : the first Slider Component on the Components Theme Page which is a Bar Graph type
- **Monitor** : the first Monitor Component on the Components Theme Page
- **Selector** : the first Selector Component on the Components Theme Page

If you have more that one of a particular type of theme component (for example, C-Bus Buttons), only the first one will be selected when placing a component. To change which one is to be used as the default, select the required one and click on the **Move to Back** tool bar button or menu item. This will then make it the "first" one and hence it will be selected in the future.

7.7.2 Theme Pages

To add a Theme Page, select the **Edit | Page | New Theme Page** menu item. Enter the name of the page (or use the default) and click on the **OK** button. It is recommended that the name of the page starts with the word "Theme" in order to distinguish that this is a Theme Page, rather than a regular Page.

The first of the Theme Pages is used for the Theme Components. The rest of the Theme Pages can be used as a "background" for the other pages in a Project.

A Theme Page can have its background Colour set and have any other Components placed on it. When this Theme Page is used by another Page, the Theme Page will be drawn as a background for the Page, and then the Page's components will be drawn on top.

7.7.3 Using Themes

Once a Theme Page has been selected for a Project Page, you will see the Theme Page in the background. You can not Select or edit the Theme Page components without Selecting the Theme Page first. You can Activate the Theme Page components, however.

Theme Pages can be based on other Theme Pages. In this way a hierarchy of Theme Pages can be created, where changing the properties of the parent Theme Page will affect the appearance of the child Theme Pages, and any Project Pages based on either the parent or child.

Themes can be loaded as Templates.

To get a better understanding of Themes, create a New Project using one of the supplied Theme Templates and :

- add some new Pages and set the Theme Page
- add some components to the new Pages
- change the Theme Pages and observe what happens to the new Pages

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7.8 Scenes

A scene is used to control several loads at once in a coordinated action. A Scene is a pre-determined set of Levels for particular Group Addresses. A scene can be used to set a series of lights to particular levels rather than setting them individually.

Common examples of uses of scenes are :
- Setting all of the lights in a building on or off
- Setting the lights in a room for a particular use (for a presentation or for a meeting)
- Controlling a series of loads for a particular use (eg. to set up for a video presentation, a Scene could dim the lights, close the curtains, lower the projector screen, start the VCR and start the projector)

Scenes can be created with the Scene Manager.

Note that the Groups in a Scene can be controlled (adjusted up and down) by a component if required.

See also Delays in Scenes

7.8.1 Triggering Scenes

Scenes can be "set" in one of two basic ways :
- By directly setting the required Scene (from a Component or Schedule)
- By setting the Scene Trigger Group to its trigger Level

If a Scene has no Trigger Group associated with it, then only the first option is available.

When a Scene is set directly, the groups in the Scene are set to their default levels. Following that, the Scene Trigger is set in case there are other C-Bus devices which contain other parts of the Scene.

If a Scene is triggered by a C-Bus event, then the Scene Trigger is not re-broadcast.

A Scene Trigger consists of :
- Network
- Application (Trigger Control by default)
- Group Address
- Level

When a C-Bus message with matching Network, Application, Group Address and Level is received, the Scene will be set (triggered). Note that the ramp rate of the received message is ignored.

If a Scene is to be triggered from a remote Network, it is necessary to ensure that the message will be routed back to a Connected Network so that it will be seen.

If several different Scenes need to be triggered and they are mutually exclusive (ie. only one will run at a time), have them all on the same Group Address, but triggered at different levels. Since a Group Address can only be at one level, only one scene will be triggered at a time.

Notes

To trigger a scene, the group address needs to be set to the trigger level, not merely ramp through it.

If the trigger group ramps to the trigger level (ie. not instantaneously), the Scene will NOT be triggered at the end of the ramp. It will be triggered as soon as the command is received.

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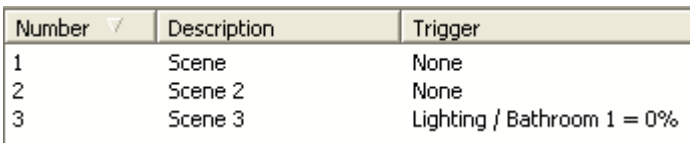
7.8.2 Scene Manager

The Scene Manager allows the user to see all scenes in a project. It also allows you to add, copy, edit and delete scenes.

To show the Scene Manager dialogue box, click on the **Edit Scenes** item in the **Edit** menu or click on the Scenes button on the tool bar.



Number	Description	Trigger
1	Scene	None
2	Scene 2	None
3	Scene 3	Lighting / Bathroom 1 = 0%

The Scene Manager shows the Scene number, name and Trigger Group for each scene in the project. The columns can be sorted by clicking on top of the column or they can be rearranged and have their widths changed by dragging them.

To create a new scene, click on the **Add** button. The Scene Editor dialogue box will appear.

To delete a scene, select the required scene from the list and click on the **Delete** button.

To edit a scene, select the required scene from the list and click on the **Edit** button or double click on the required scene.

To copy a Scene, select the required Scene, and click on the **Duplicate** button.

To change the order of the Scenes, use the **Move Up** and **Move down** buttons.

To automatically create a Scene :
1. Before opening the Scene Manager, set the levels of the Group Addresses to their desired levels
2. Select Components which control the desired groups
3. Open the Scene Manager
4. Click on the **Auto Create** button
5. Enter a name and the trigger details in the Scene Editor

When you click on **OK** to close the Scene Manager, checks are made to ensure that if scenes trigger each other, there are no circular references, For example, if scene 1, triggers scene 2 which then triggers scene 1, these scenes will trigger each other indefinitely. If there are circular references, you will be alerted.

Scene Naming

To simplify the management of large numbers of Scenes, it helps to apply a structured naming scheme for the Scenes. For example, all Scenes for the first floor of a building may start with L1 and so forth. When the scenes are sorted by name, then they will be grouped together. An example of well-named Scenes might be as follows :

- L1 All Off
- L1 All On
- L1 Cleaning
- L1 Night
- L2 All Off
- L2 All on
- L2 Cleaning
- L2 Night
- etc

Large Scenes

In large buildings, there will be typically be a series of scenes to switch on and off parts of the

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building. To switch on and off the whole building, it can be easier to create a scene which triggers the other scenes, rather than creating huge scenes.

See also Project Summary, Printing

7.8.3 Scene Editor

The Scene Editor allows the user to edit a scenes in a project. The Scene Editor is accessed via the Scene Manager.

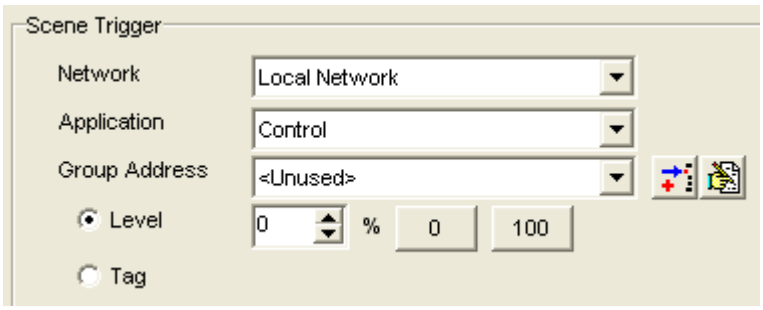
Each Scene has several main properties :

- A name/description
- An triggering Group Address
- A series of actions

Name

The name should be something meaningful to you so that it makes sense when you see it in a list.

Triggering



The triggering Group Address is the Group Address and level that trigger the Scene to be executed. If the Scene does not need to be triggered from another input unit, leave this as "unused". Typically, a particular Group Address on the Control Application (number CA hex) will trigger the Scene when it is at 100%.

Actions

The actions are the C-Bus events that the Scene will execute.

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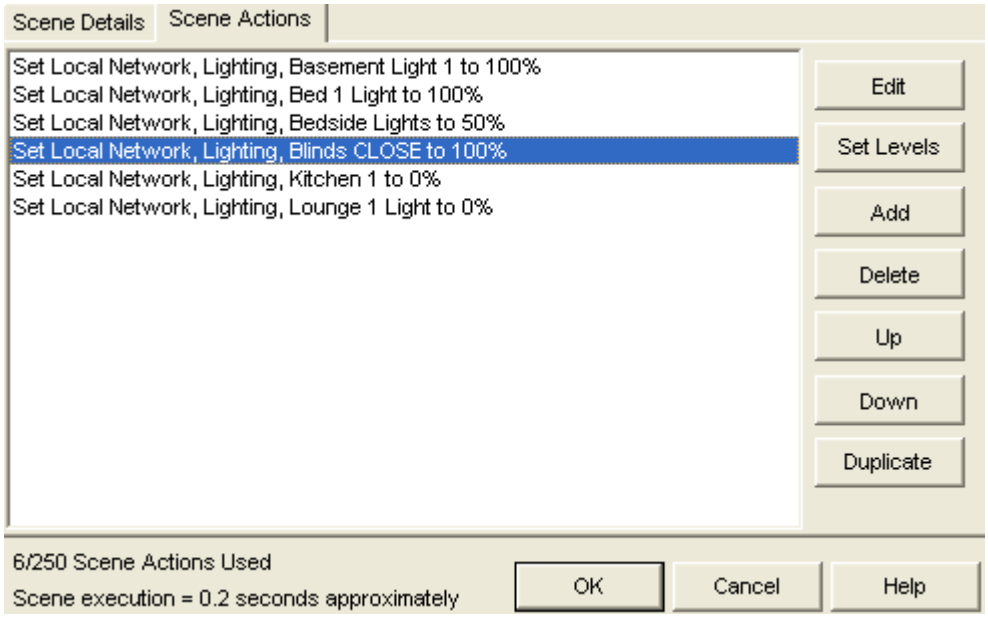

To add a new action, click on the **Add** button. The Scene Action Editor will open. Enter the desired Scene Action and click on **OK** when complete, or click on **Apply** to add the action and leave the Scene Action Editor open to allow another action to be added.

To delete an action, select the required one(s) from the list and click on the **Delete** button.

To edit an action, select the required one from the list and click on the **Edit** button or just double click the item in the list.

To edit more than one scene action at a time, select the required ones and click on the **Edit** button. The parameters that are common to each of the Scene Actions will be shown. All other parameters will be blank. If any parameter is changed, it will apply to all of the selected Scene Actions.

For example, to change the level of all Scene Actions to 0%, select all of the Scene Actions (select one, then hold down the Shift or Ctrl key while selecting the others). Click on the **Edit** button. Change the C-Bus level to 0%. Click on **OK**. All of the Scene Actions will now be set to 0%. Nothing else in the Scene Actions will have changed.

To change the order in which actions occur, select the required one(s) from the list and click on the **Up** or **Down** buttons until it is in the correct position.

To duplicate a Scene Action, select the required one and click on the **Duplicate** button.

When all changes are complete, click on the **OK** button. To exit without making changes to the Scene, click on the **Cancel** button.

Once a scene has been created, it is possible to quickly make the scene settings correspond to the current C-Bus levels by clicking on the **Set Levels** button. This is only available if the software is connected to C-Bus.

At the bottom of the form, there is some text showing how many scene actions have been used. In the above case, there are 6 out of a possible 250 used.

There is also some information about the approximate time needed to execute the Scene. The time taken will depend a lot on how busy C-Bus is at the time, so this figure is rather approximate, and tends to be conservative.

Note that pressing a scene button for more that 10 seconds will show the Scene Editor dialogue

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box. This only applies if the button triggers the scene directly, not if it sets the trigger for a scene.

See also Printing, Special Functions

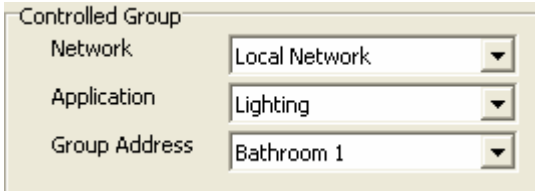
7.8.4 Scene Action Editor

The Scene Action Editor allows the user to edit a Scene Action. The Scene Action Editor is accessed via the Scene Editor.

The Scene Action Editor allows you to enter the following details of the Scene Action :

Controlled Group

This is the desired Network, Application and Group Address.



Action

This allows you to either ramp a group to a level or to pulse a group to a level for a particular duration. The parameters entered are :

- C-Bus Level
- Ramp Rate
- Pulse duration (if applicable)
- Pulse return level (if applicable) – this is the level that the Group Address will be set to when the pulse duration is complete.

7.9 Schedules

A Schedule is used whenever something has to occur at a particular time. This can be an event

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that occurs only once or something that is repeated time and time again. The Schedule Plus Software has a list of things to do, and every second it checks whether one of those things should be done at this particular time. Every Schedule creates a new entry in that list.

Generally, Schedules are independent of each other. However, sometimes, one Schedule but not another must be executed depending upon some condition. For example the Schedule of watering used in the summer (every two days, at night) might be quite different than the winter Schedule (every week, while at work during the day) both Schedules can't apply; it's one or the other. This is called a "mutually exclusive" scheduling situation.

It is possible to set up mutually exclusive schedules to handle this kind of situation by means of setting different levels on an enabling Group Address. See the Schedule Editor for details.

Schedules are created and managed using the Schedule Manager.

Schedules use the computer clock to determine the time. The accuracy of the schedules is therefore limited to the accuracy of the computer clock. The computer date and time can be set using Special Functions.

See also Special Days.

7.9.1 Schedule Manager

The Schedule Manager allows the user to see a summary of all Schedules in a project, and to see which are active. It also allows you to add, duplicate, edit and delete Schedules.

To show the Schedule Manager dialogue box, click on the **Edit Schedules** item in the **Edit** menu or click on the **Schedule** button on the tool bar.

ADDING, DELETING & EDITING SCHEDULES

To create a new Schedule, click on the **Add** button. The Schedule Editor dialogue box will appear. If a Schedule Collection is selected, the new Schedule will have the same enabling conditions as the Schedule Collection.

To delete a Schedule, select the required Schedule from the list and click on the **Delete** button.

To edit a Schedule, select the required Schedule from the list and click on the **Edit** button or double click on the required schedule. The Schedule Editor dialogue box will appear.

To duplicate a Schedule, select the required Schedule, and click on the **Duplicate** button. You will be prompted to enter the name of the new Schedule, which must be unique.

SCHEDULE TREE

The Schedule Tree view on the left of the Schedule Manager allows you to select sets of schedules.

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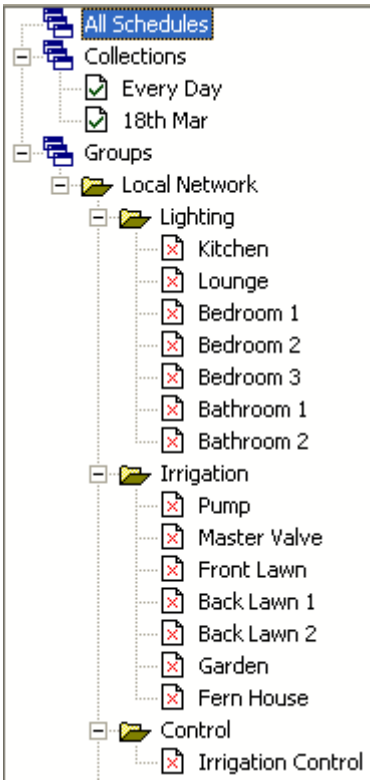

The alternative Schedule selection options are :

- All Schedules : Select the **All Schedules** node, and all Schedules will be displayed.
- Schedule Collections (see below)
- By Network : select the desired Network and all Schedules related to that Network will be shown.
- By Application : select the desired Network and Application and all Schedules related to that Network/Application will be shown.
- By Group Address : select the desired Network, Application and Group Address and all Schedules related to that Network/Application/Group Address will be shown. The Group Address icon in the tree shows the state of the Group Address (On / Off).

The **Show Groups** item on the tool bar allows you to select whether to display all of the Groups on the tree. It is faster to not have them displayed, particularly when there are a lot of Schedules.

SCHEDULE COLLECTIONS

The Schedules are automatically arranged into Schedule Collections, which are groups of related Schedules. All of the Schedules in a Schedule Collection will be executed under the same conditions (ie. they are executed on the same day(s) and have the same enabling group). The enabling conditions under which the Schedule is executed are shown at the bottom of the Schedule Manager dialogue box.

Selecting a Schedule Collection from the Schedule Tree will display only the Schedules in that Schedule Collection. Selecting All Schedules will display all Schedules.

If you double click on a Schedule Collection in the list, it will open the Schedule Collection Conditions dialogue box. This will allow you to change the Enabling Group Address and the Day on which all of the Schedules in the selected Schedule Collection occur. Refer to the Schedule Editor for more details.

The Schedule Collection icon in the tree shows the enabled state of the Schedule Collection (Enabled / Disabled).

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SCHEDULE TABLE VIEW

To view the Schedule data as a table, click on the **Schedule Table** button. The data will be displayed in several columns as described below :

Number	Description	Date	Time	Action	Enable	State
1	Irrigation	Every Day	8:00:00 PM	Set Irrigation Control to Lawns	Always	Disabled
2	Night	Every Day	Sunset + 1:00:00	Ramp Lounge to 100% over 8 seconds	Always	Disabled
3	Enable Irrigation	18th Mar	4:04:00 PM	Set Irrigation Enable to Irrigation On	Always	Disabled
4	Test	Every Day	7:50:20 PM	Pulse Scene "Scene 2" Groups to 100% for 3 sec	Always	Disabled

The columns are :

- **Number** : This is the number of the Schedule.
- **Description** : This is the name that has been given to the Schedule.
- **Date** : This is the day(s) that the Schedule will be executed.
- **Time** : This is the time that the Schedule will be executed.
- **Action** : This is the action that the Schedule will perform.
- **Enable** : This shows under which conditions the Schedule is enabled.
- **State** : This is whether the Schedule is enabled or not.

Note that the width of the columns can be dragged and the order of the columns can be changed by dragging the column to where it is required. The Schedules can be sorted by any column by clicking on the top of that column.

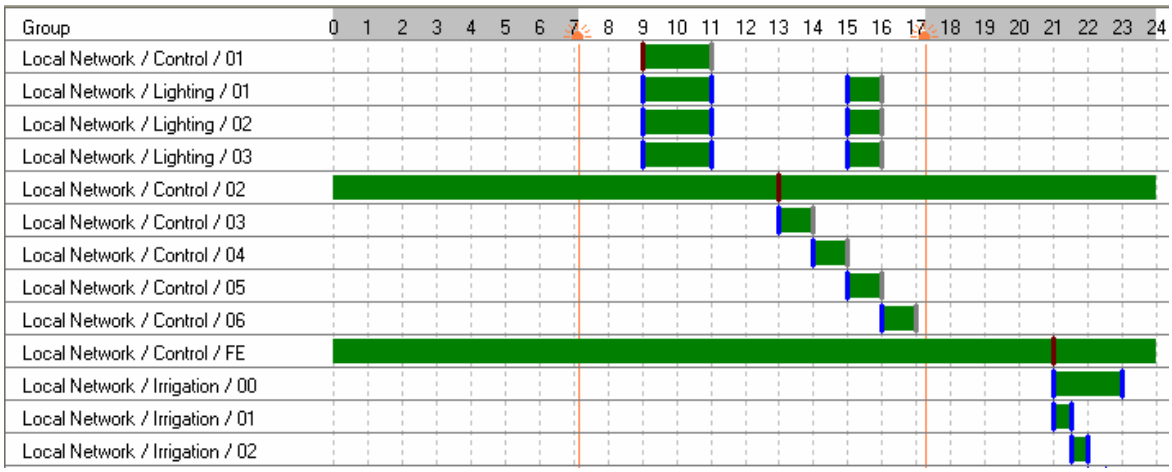
Double clicking on a Schedule in the list will show the Schedule Editor dialogue box.

To display all of the days in the year in which the selected schedule will occur, click on the **Year View** button.

SCHEDULE GRAPH VIEW

Clicking on the **Schedule Graph** button shows the Schedules in the selected Schedule Collection in a time line from midnight to midnight, sorted by controlled group.

Note that if you select **All Schedules**, you will not be able to display them as a graph because displaying independent scheduled events this way is not meaningful.


Group
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Local Network / Control / 01
Local Network / Lighting / 01
Local Network / Lighting / 02
Local Network / Lighting / 03
Local Network / Control / 02
Local Network / Control / 03
Local Network / Control / 04
Local Network / Control / 05
Local Network / Control / 06
Local Network / Control / FE
Local Network / Irrigation / 00
Local Network / Irrigation / 01
Local Network / Irrigation / 02

Each Schedule appears on the graph as a vertical line (the Schedule Time Marker). The Schedule Time Marker shows the type of schedule :

- A normal Schedule is a dark red line

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- A Scene is a blue line
- An Irrigation cycle is a blue line
- The end of a pulsed schedule is a grey line
- Any repeat Schedules are only shown at the first time they occur. They are indicated by a red circle on the Schedule Time Marker.
- Any Schedules related to sunrise or sunset are indicated by a picture of the sun on the Schedule Time Marker.

The level of the controlled Group is shown as a green bar. The height of the bar is proportional to the level of the Group.

The schedule times can be edited by dragging the vertical lines which mark the schedules. If a scheduled Scene is dragged, all Groups in the Scene will be affected.

Double clicking on a Schedule line in the graph will show the Schedule Editor dialogue box for that Schedule.

The sunrise and sunset time is shown at the top of the graph by icons looking like a rising (or setting) sun.

RUNNING SCHEDULES

Note that Schedules will not be executed unless the Scheduler is running. To run the scheduler, select the **Run** check box. The scheduler can also be set running by clicking on the **Edit | Schedule | Run Scheduler** menu item or using the Command-Line Parameters. The state of the Run Scheduler item is remembered. The next time that Schedule Plus is run, the state will be the same.

NAMING SCHEDULES

To simplify the management of large numbers of Schedules, it helps to apply a structured naming scheme for the Schedules. For example, all Schedules for the first floor of a building may start with L1 and so forth. When the Schedules are sorted by name, then they will be grouped together. An example of well-named Schedules might be as follows :

- L1 Workdays Finish
- L1 Workdays Night
- L1 Workdays Start
- L2 Workdays Finish
- L2 Workdays Night
- L2 Workdays Start
- etc

REFRESHING GROUPS

The state of Group Addresses shown on the Schedule Tree can be refreshed to show the current state on C-Bus by clicking on the Refresh button. This will also update the enable state shown in the Schedule Table View. To make the refreshing happen automatically, select the **Auto Refresh** check box. The refreshing may take several seconds when there are a lot of Schedules.

See also Project Summary, Printing, Schedule Catch-Up

7.9.2 Schedule Properties

The Schedule Editor allows the user to edit a schedule. The Schedule Editor is accessed via the Schedule Manager.

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Each Schedule has several main properties :

- A name/description
- An enabling Group
- The time at which it will occur
- A day or days on which it will occur
- An event which will be executed

Make the necessary changes on each of the tabs. When all changes are complete, click on the **OK** button. To exit without making changes to the Schedule, click on the **Cancel** button.

See also Special Functions, Schedule Examples and Year View

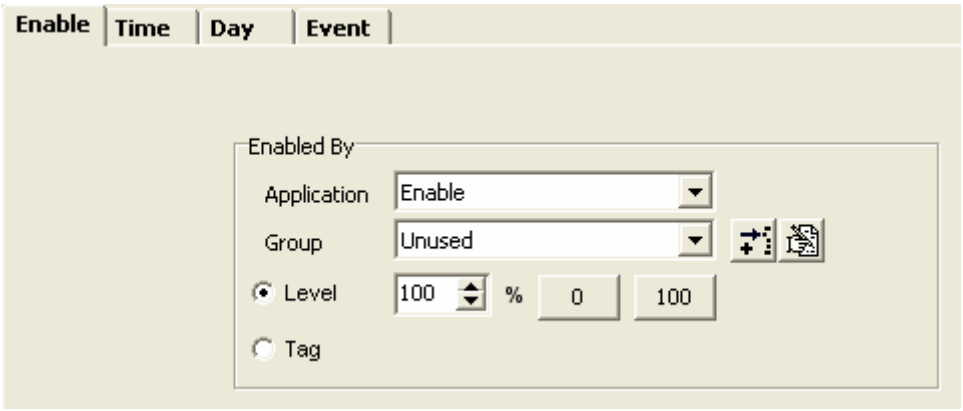
7.9.2.1 Schedule Description

The description for the Schedule is set at the top of the Schedule Editor form. The description should be something meaningful to you so that it makes sense when you see it in a list.

7.9.2.2 Schedule Enabling

A Schedule can be turned on or off. If the schedule is turned on, the Schedule proceeds as programmed. If it is off, the Schedule is ignored. This effect is achieved by means of an enabling Group Address. This Group Address and the Level determine whether a Schedule is to run. If the Schedule does not need to be turned on or off, the Group Address is left as "unused". Typically, a particular Group Address on the Control Application (number CA hex) will enable the Schedule when it is at 100%.

The Schedule Editor **Enable** Tab allows you to select how you want to enable/disable the Schedule.



There are two basic techniques to generate mutually exclusive schedules (ie. only one will run at a time.) These are both illustrated in the Schedules.CTD example provided with the Schedule Plus software.

The first of these techniques is to assign all Schedule Enable Groups the same Group Address and use a different level for each Schedule. Since a Group Address can only have one level at a time, only one Schedule can be in effect at one time.

Alternatively, separate Group Addresses can be used to enable different Schedules. Scenes can be used to set the Group Address levels to enable a different Schedule. The designer is fully responsible for ensuring that the activity is mutually exclusive and so there is a potential for errors (The Mutually Exclusive page of the Schedules.CTD project illustrates this.)

See also Power Failure Recovery.

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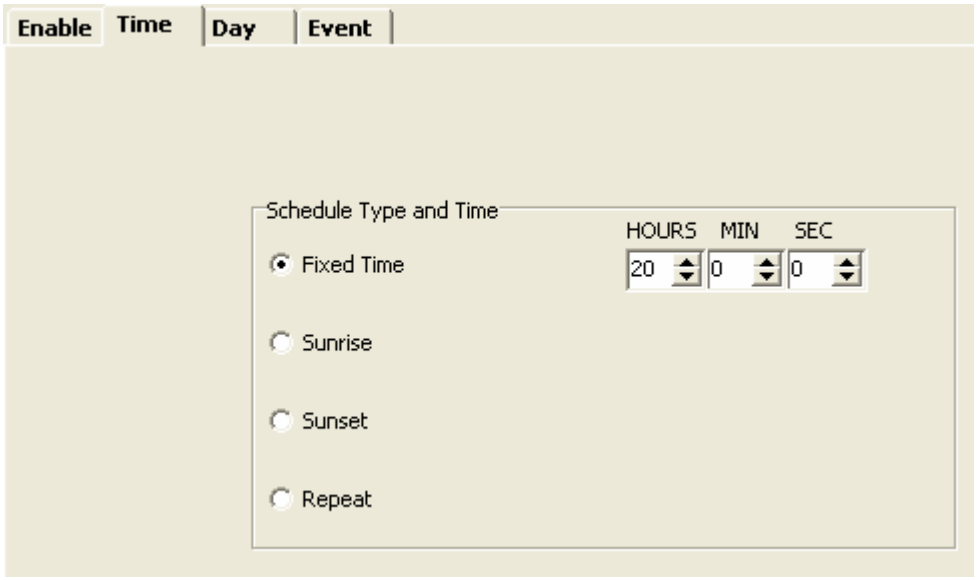
7.9.2.3 Schedule Time

The time that the Schedule is to occur is set on the Schedule Editor **Time** tab.



There are several options :

- **Fixed Time** : The Schedule time is set in 2400 hour time (eg. 5PM = 1700).
- **Sunrise** : The Schedule time is sunrise plus or minus a fixed offset.
- **Sunset** : The Schedule time is sunset plus or minus a fixed offset.
- **Repeat** : The Schedule occurs at a regular interval. For example, if the interval is set to 30 minutes, it will first occur at 30 minutes past midnight, then every 30 minutes after that. This should normally only be needed for testing purposes.

7.9.2.4 Schedule Day

The day(s) that the Schedule is to occur is set on the Schedule Editor **Day** tab. By default, the Schedule is set to occur every day.

There are two ways of selecting the day. By clicking on the **more** or **less** button, you will see more or less detail as required. The option with less detail allows you to select days as follows :

- Once Only – you will need to enter the date, or select it from the drop-down calendar
- Every Day
- Every Week Day (Monday to Friday)
- Every Weekend (Saturday and Sunday)
- Every Week – you will need to select which day of the week
- Every Month – you will need to select which day of the month
- Every Year – you will need to enter the day of the year, or select it from the drop-down calendar (the selected year is ignored)

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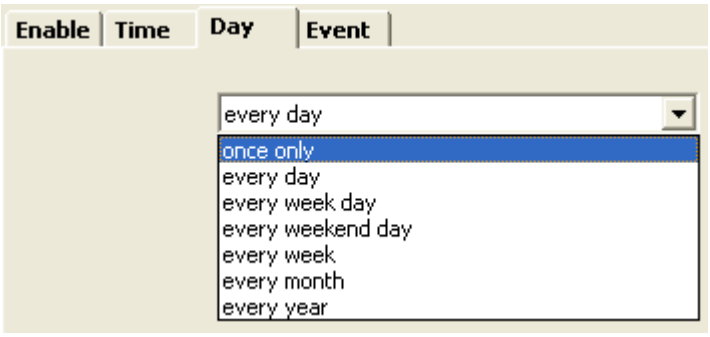
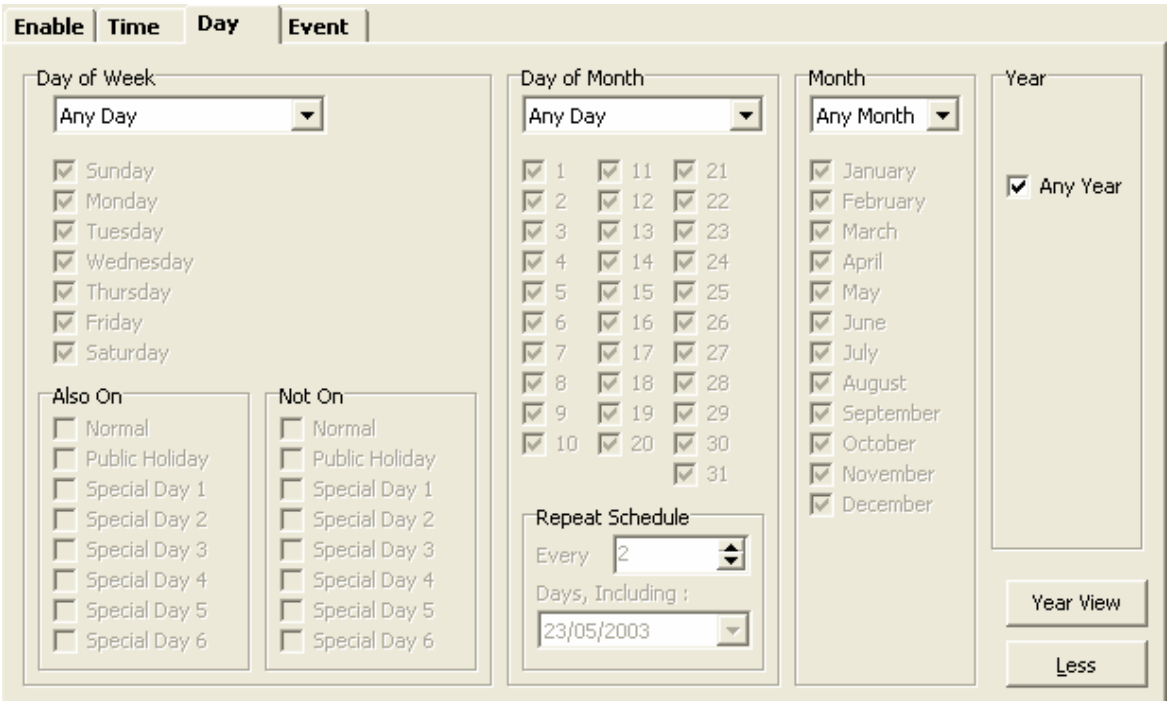


For more complicated day selection, you will need the page with more detail (click on the **more** button) :



Day of the Week Group

If you want the Schedule to occur on particular days of the week or on Special Days, select the days required. The drop-down list at the top allows you to select various combinations, including :

- None (this clear the lists for you). You must then select one or more days, otherwise the Schedule will never run.
- Any Day (i.e. you don't care which day of the week it is)
- Weekdays (Monday - Friday)
- Weekends (Saturday and Sunday)
- Work Days (Monday to Friday, but not Public Holidays)
- Non-work Days (Saturday, Sunday and Public Holidays).

To enter something different, select **Custom** from the list, and select the required days.

The Schedule will run on the days of the week selected (Sunday - Saturday) and also on any Special Days selected in the **Also On** list, but not on any Special Days selected in the **Not On** list.

In the example below, the Schedule will occur on Weekends (Saturday and Sunday) and also on Public Holidays. For many people, these are non-working days.

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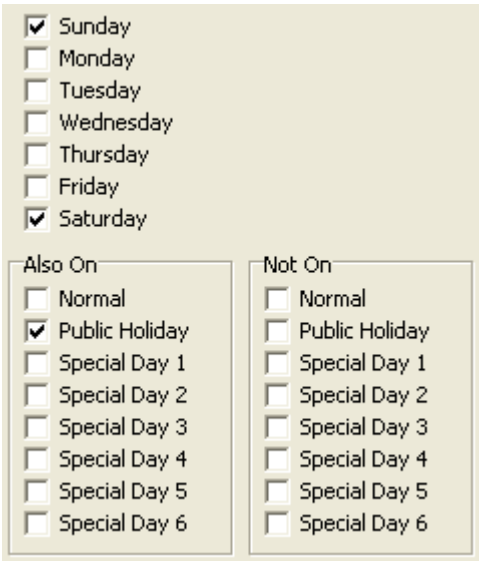
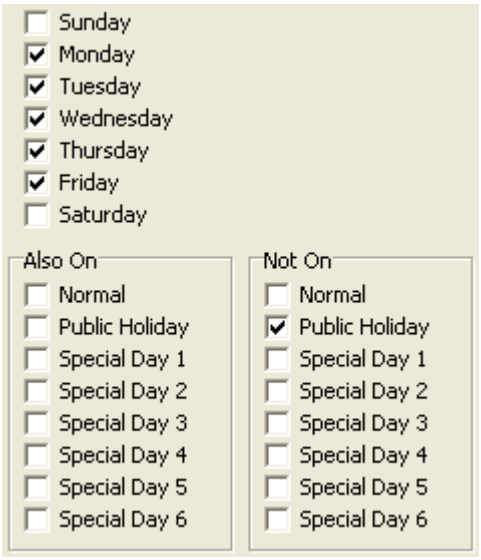


In the example below, the Schedule will occur on Week Days (Monday to Friday) but not on Public Holidays. For many people, these are working days.



If you want a Schedule to occur on just "normal days" (any day that is not one of the Special Days) :

- select **Custom** from the list
- switch off **Sunday** - **Saturday**
- select **Normal** in the **Also On** list

Day of the Month Group

If you want the Schedule to occur on particular days of the month, select the days required. The drop-down list at the top allows you to select various combinations, including :

- None (this clear the list for you). You must then select one or more days, otherwise the Schedule will never run.
- Any Day (i.e. you don't care which day of the month it is)
- The First Week of the Month (day 1 - 7)
- The Second Week of the Month (day 8 - 14)
- The Third Week of the Month (day 15 - 21)
- The Fourth Week of the Month (day 22 - 28)

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- The Last Week of the Month (the last 7 days of the month)
- Odd Days (1, 3, 5, etc)
- Even Days (2, 4, 6 etc)
- Repeat Days (eg. every 3 days)

To enter something different, select **Custom** from the list, and select the required days.

Repeat Days

For repeat days, you need to select how often you wish the schedule to occur and the next day that it is to occur. If you select the Schedule to occur every 5 days, then the next day for it to occur will need to be sometime in the next 5 days.

Each time the Schedule Editor is opened, it will show the next time that the Schedule is to occur, which is not necessarily the date which you entered. For example, if the date is the second of January and you set up a Schedule to be every 5 days starting from the 11th of January, then the Schedule will be due on the 1st, 6th, 11th, 16th, 21st and 26th of January. When you re-open the Schedule Editor, it will show that the Schedule is starting (next due) on the 6th of January. If you re-open the Schedule Editor on the 20th of January, it wil show that the Schedule is starting on the 21st of January.

Month Group

If you want the Schedule to occur in particular months, select the months required. The drop-down list at the top allows you to select various combinations, including :

- None (this clear the list for you). You must then select one or more months, otherwise the Schedule will never run.
- Any Month (i.e. you don't care which month it is)

To enter something different, select **Custom** from the list, and select the required months.

Year Group

If you want the Schedule to occur in a particular year, de-select the **Any Year** check box and enter the year required.

Combinations

The Days, Months and Years can be combined in any way you wish. The Schedule will only be executed on days where the Day of the Week, Special Days, Day of the Month, Month and Year ALL match the selection.

To display all of the days in the year in which the Schedule will occur, click on the Year View button.

See Schedule Examples to see how to set up the more complex Schedules.

7.9.2.5 Schedule Event

The Schedule Editor **Event** tab allows you to set the Schedule Event. The Event is the action which will occur at the scheduled time and day.

C-Bus Control

For C-Bus Control, there are three choices :

- setting a Group to a particular level;
- pulsing a group; or

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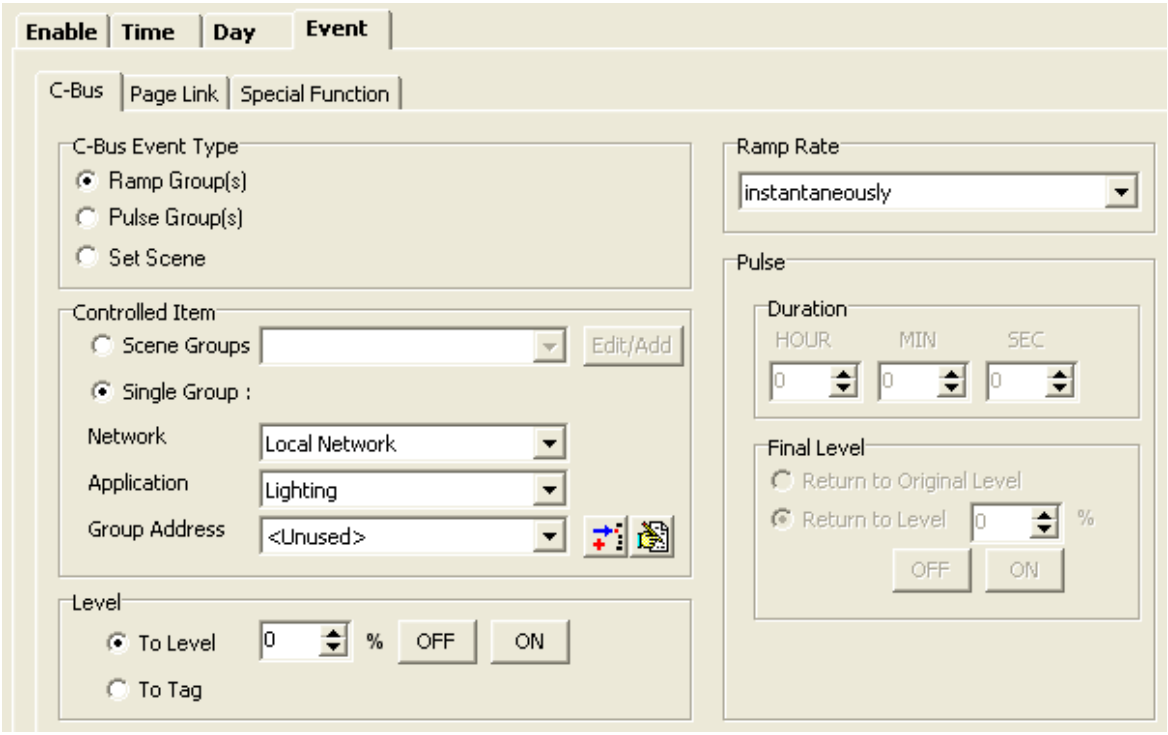
- setting a scene.



To control an individual group, select the **Single Group** button. To control all of the groups in a Scene, select the **Scene Groups** button and select the appropriate Scene.

To set a group or Scene groups, click on the **Ramp Group** button and select the required group(s), level and ramp rate.

To pulse a group or Scene Groups (ie. set it to a particular level for a certain time), click on the **Pulse Group** button and select the required group(s), level, ramp rate, duration and return level (the level returned to at the termination of the pulse)

To set a scene, click on the **Set Scene** button and select the required scene from the list.

Notes on Using Timers (Pulsed Groups)

Timers are used where the exact time that something is on for is critical. For example, if you want something to be pulsed on for a couple of seconds, then a Pulse is appropriate. If you want to switch a light on at 7:00 PM, then off at 6:00 AM, then an 11 hour pulse is not so appropriate. It is more suitable to have two Schedules. See Power Failure Recovery.

Page Link

You can also have the Schedule select a page by selecting the required page from the **Page Link** tab. An example of a use for this would be to have Schedule Plus display a page reminding the user to put out the garbage on a particular night.

Special Functions

You can also have the Schedule execute a Special Function by selecting the required one from the **Special Function** tab. The most common use for Special Functions being executed from a Schedule is to raise an alarm at a particular time.

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Note that not all Special Functions can be executed from a Schedule (you will only be given a choice of some of them).

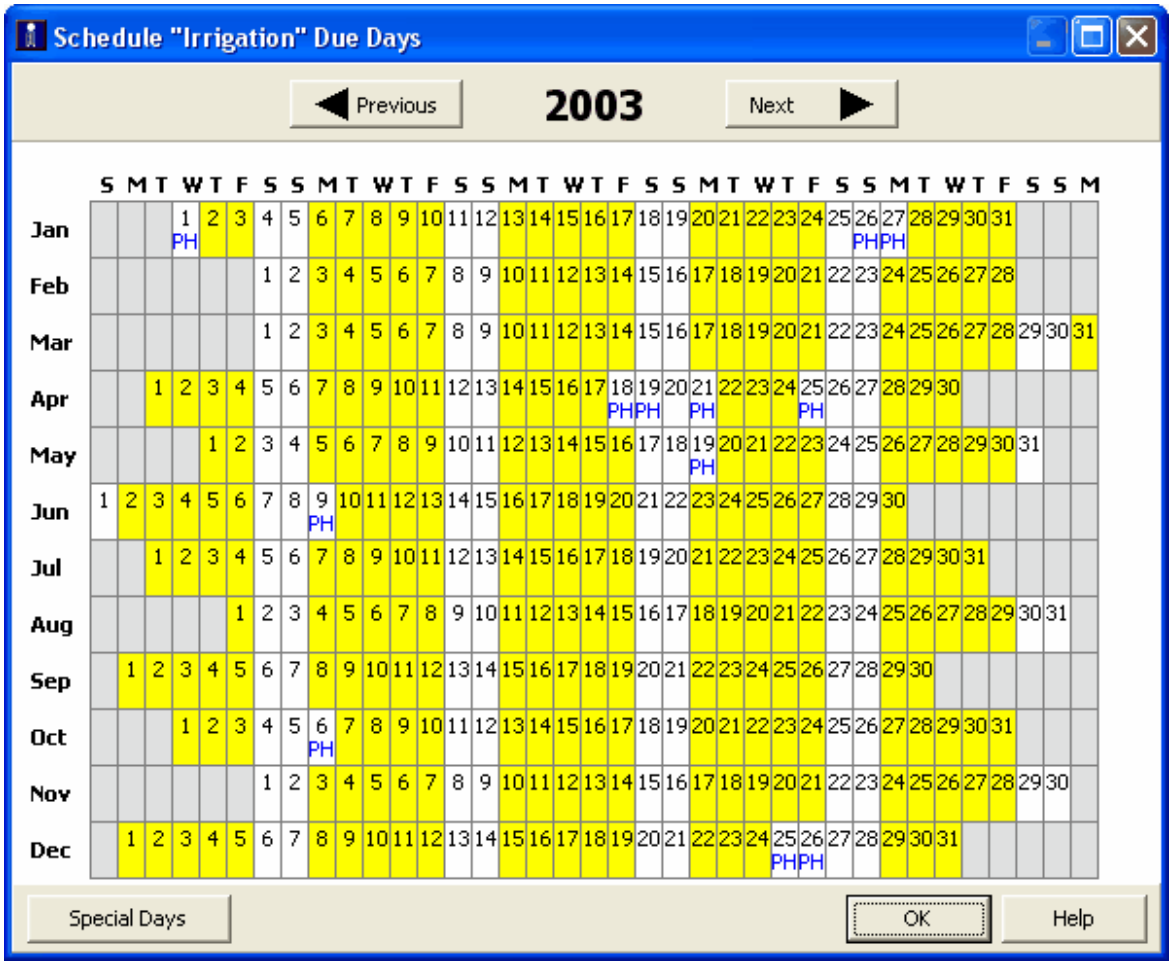
7.9.3 Year View

Selecting the days for which a Schedule is to occur can be complex. The Schedule Year View displays every day on which the selected Schedule will occur to enable you to confirm that you have set up the Schedule correctly.

To open the Schedule Year View :
In the Schedule Editor **Day** tab, click on the Year View button; or
In the Schedule Manager, select a Schedule and then click the **Year View** button on the Tool Bar

The days highlighted are the ones on which the Schedule will occur. Click on the **Previous** button to go back a year, or on the **Next** button to go forward a year.

Special days are marked with a PH for public Holiday or S1...S6 for Special Days 1 through to 6.



7.9.4 Schedule Examples

Schedules are set with the Schedule Editor. This section provides guidance on how to set up the days of some of the more complex Schedules.

Standard Schedules

The due days for most Schedules can be set using the **Day** tab of the Schedule Editor with the

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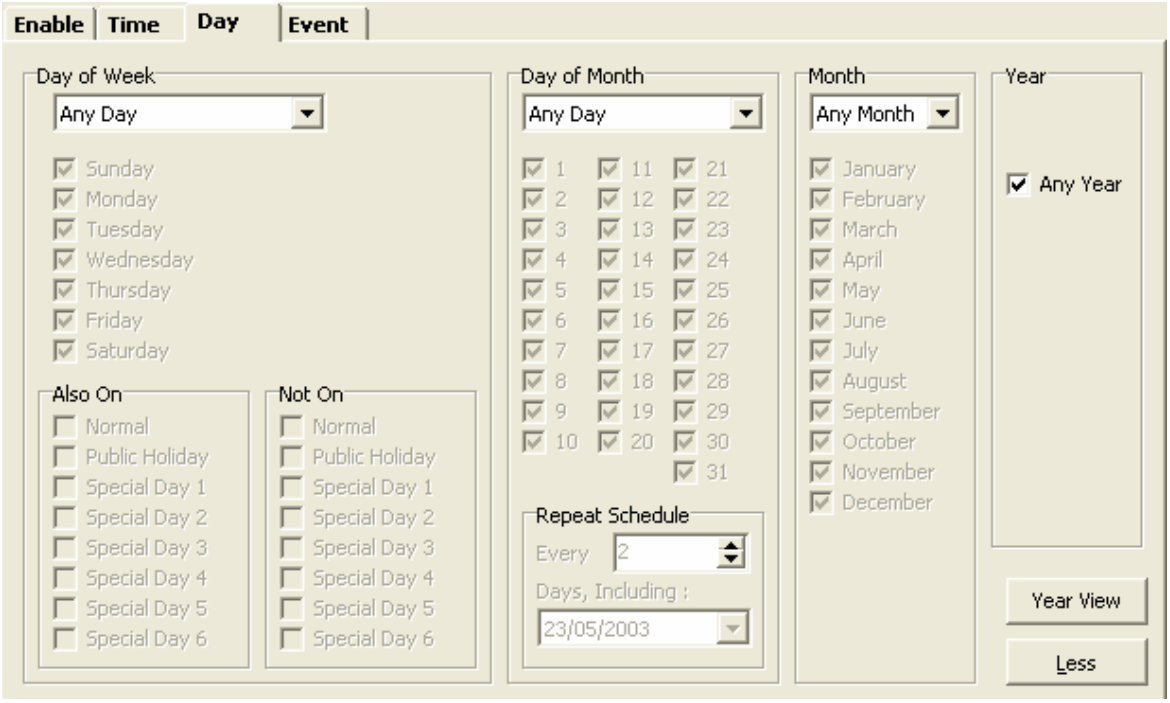
More option selected :



Sets of days can be selected with the **Day of Week**, **Day of Month**, **Month** and **Year** group boxes.

For a particular day to be included in a Schedule it must be present in each of these sets of days.

Another way to look at is : ***any day which does not belong in any one of the sets (ie. it is the wrong day of the week, Special Day type, day of the month, month or year) will NOT be included in the Schedule***.

Example 1

For example, suppose you have selected :
- Week Days (Monday to Friday) in the **Day of Week** set
- Any Day (ie. all days, 1..31) in the **Day of Month** set
- January to June in the **Month** set
- 2003 in the **Year** set

Any day which is present in each of the above sets will be included in the Schedule. Hence :
- Monday 23 June 2003 will be in the Schedule (the day is in Monday - Friday, the day of the month is in 1-31, the month is in Jan - June and the year is 2003)
- Monday 21 June 2004 will not be in the Schedule (the day is in Monday - Friday, the day of the month is in 1-31, the month is in Jan - June but the year is not 2003)
- Any Saturday or Sunday will not be in the Schedule.
- Any day in July - December will not be in the Schedule
- Any day not in the year 2003 will not be in the Schedule

Example 2

If you want the Schedule to occur on the first Tuesday of every month, select **Custom** in the list in the **Day of Week** group and select **Tuesday**. Select **Week 1** from the list in the **Day of Month** Group. Leave the **Month** group set to **Any Month**. Leave the **Year** group set to **Any Year**.

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Example 3

To have a schedule repeat every three days, select **Any Day** in **Day of Week** and **Any Month** in the **Month** group. Select **Repeat** in **Day of Month**. Select **3** in the **Repeat Schedule** group. Select the next day that you wish to have it occur.

Public Holidays and other Special Days

Special Days can be used to define sets of days which are related to each other. These can be included in Schedules or excluded from Schedules by selecting them in the **Day of Week** group box.

Example 4

To have a Schedule occur on Monday to Friday but not on Public Holidays, select **Custom** in the list in the **Day of Week** group and select **Monday** through to **Friday**. Select **Public Holidays** in the **Not On** group. Use the Special Day Manager to set the Public Holidays.

Example 5

To have a Schedule occur on a Birthday :

- Use the Special Day Manager to create the "Birthday" Special Day category and to set all of the Birthdays
- In the Schedule Editor select **Custom** in the list in the **Day of Week** group and de-select **Sunday** through to **Saturday**. Select **Birthdays** in the **Also On** group.

Note : When you have set up a Schedule, use the Year View to confirm that you have it correct.

7.9.5 Schedule Catch-Up

When the PC clock is adjusted, there is a possibility that a Schedule may have been due to occur in the time that was missed. The rules of determining what happens are :

- If the clock is adjusted back, nothing happens. It is possible that a scheduled event may occur twice.
- If the clock is adjusted forward by less than one hour, all Schedules that were due in that time are quickly executed. Pulsed events will still be executed for the defined duration.
- If the clock is adjusted forward by more than one hour, but less than 24 hours, the Schedules are quickly executed but :
  - Commands are sent at the end of the process to set the final level of any Group Address level that needs to be changed.
  - Pulsed Schedules are ignored.
  - Ramping groups will be set the end level of the ramp.
- If the clock is adjusted forward by more than 24 hours, only the Schedules due in the last 24 hours of that time are executed.

During the Schedule catch-up process, a progress dialogue will be shown. Clicking on the **Cancel** button will terminate the Schedule Catch-up.

See also Command Line Parameters

7.9.6 Synchronising to Schedules

When Schedule Plus starts up, or following a Power Failure, the Group Addresses will not necessarily be at the levels that they should be for the time of the day. The Group Addresses can all be set to their correct levels for the time of the day by :

- Selecting the Options | Sync to Schedules menu item
- Clicking a Component with a Sync to Schedules Special Function

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- Using a Command Line Parameter

The Synchronising process is the same as doing a Schedule Catch-Up for the last 24 hours. All Schedules for the last 24 hours are executed in quick succession.

7.10 Access Control

Access to the Schedule Plus project pages and to the Schedule Plus software functions can be limited based on a user's Access Level.

Each project Page has an Access Level. If the currently logged in user has an Access Level equal or greater than a page's Access Level, then they can view that page. If not, then they will need to log-in first.

Similarly, every function of the Schedule Plus software also has an Access Level. If the user does not have access to a function, then it will either appear as being disabled or will be invisible, depending on the configuration of the Access Manager.

Access Levels can be made available at particular times or on particular days is required.

The default Access Levels are :
- Level 0 : Everyone
- Level 1 : User 1
- Level 2 : User 2
- Level 3 : User 3
- Level 4 : Supervisor
- Level 5 : Administrator

A user can access anything which has an Access Level equal or lower than the user's Access Level. The lowest level is available without having to log-in.

Using Access Levels

To use Access Control with a project, follow these steps :
1. Create the desired Access Levels
2. Add the users
3. Assign which Access Levels have access to which features
4. Assign Access Levels to pages which are to be restricted
5. Add buttons with Log-in and Log-out Special Functions where necessary

If you require additional security, Schedule Plus comes with a run-time version of the software which has no editing features, and always runs in Operation Mode. You can use the normal version of Schedule Plus to edit the project and then remove the editing version of Schedule Plus from the computer and use the operation-only version for the day to day use.

Note :

User passwords are encrypted in the Project file, however it is recommended that if security is critical, then the project should be saved as an encrypted file.

7.10.1 Access Levels

Access Levels provide a means of limiting access to the Schedule Plus software. Access Levels can be defined using the Access Control Manager. To open the Access Control Manager, either :
- Click on the **Edit Access Control** item in the **Edit** menu; or
- Click on the **Access Control** button on the Tool Bar

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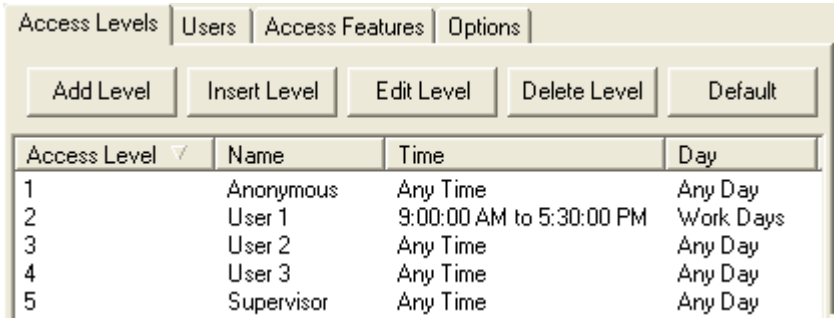
Access Levels Tab

This allows Access Levels to be added, deleted and edited. The list columns can be rearranged or have their widths changed. To sort by a column, click on the top of that column.



To set the default Access Levels, click on the **Default** button.

To add a new Access Level, click on the **Add Level** button. To Insert a new Access Level in the list, select an Access Level, then click on the **Insert Level** button.

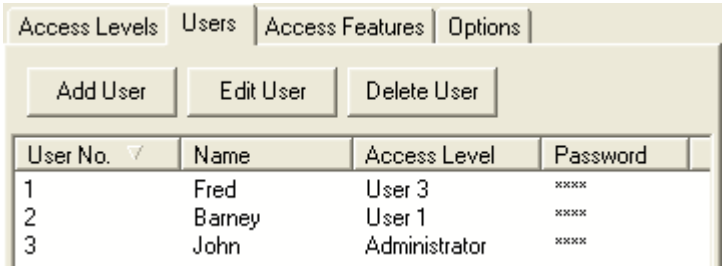
To delete an Access Level in the list, select an Access Level, then click on the **Delete Level** button.

To edit an Access Level, either :
- select an Access Level, then click on the **Edit Level** button; or
- double click on an Access Level

This will open the Access Level Editor.

Users Tab

This allows you to add Users and assign them Access Levels. The list columns can be rearranged or have their widths changed. To sort by a column, click on the top of that column.



To add a new user, click on the **Add User** button.

To delete a user, select the user, then click on the **Delete User** button.

To edit a User, either :
- select a User, then click on the **Edit User** button; or
- double click on a User

The User Editor will appear, allowing you to set the user properties.

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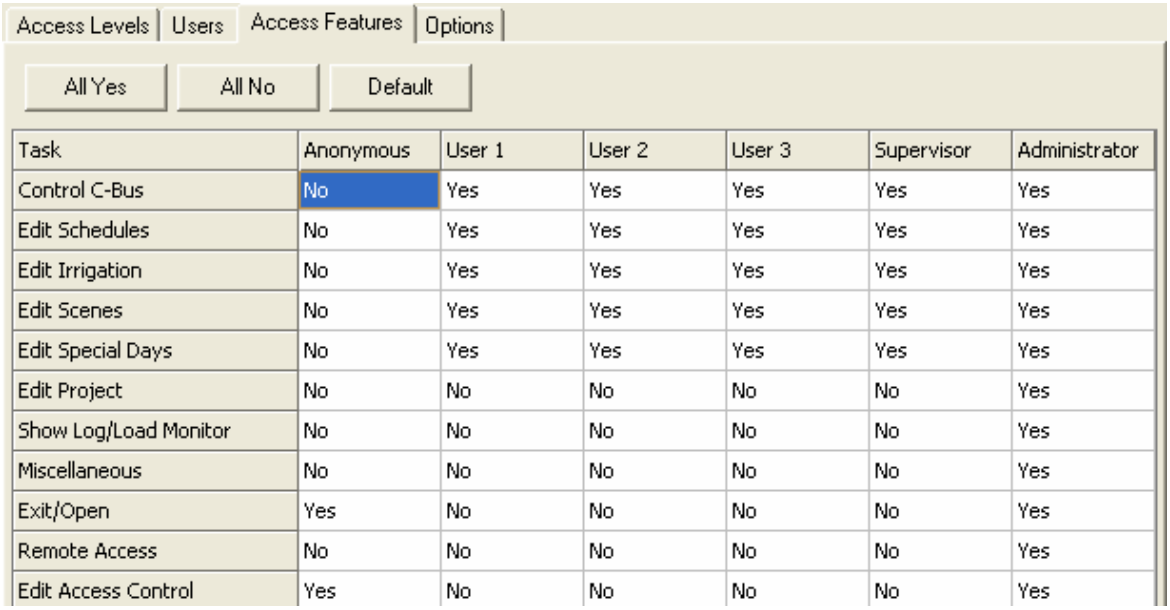
Access Features Tab

The Access Features allows you to set which Access Levels can access which Schedule Plus software features. To change whether an Access Level has access to a particular feature, click on the appropriate cell in the array and it will change between :

- None (no access)
- Full (full Access)
- Partial (partial access)



Task	Anonymous	User 1	User 2	User 3	Supervisor	Administrator
Control C-Bus	No	Yes	Yes	Yes	Yes	Yes
Edit Schedules	No	Yes	Yes	Yes	Yes	Yes
Edit Irrigation	No	Yes	Yes	Yes	Yes	Yes
Edit Scenes	No	Yes	Yes	Yes	Yes	Yes
Edit Special Days	No	Yes	Yes	Yes	Yes	Yes
Edit Project	No	No	No	No	No	Yes
Show Log/Load Monitor	No	No	No	No	No	Yes
Miscellaneous	No	No	No	No	No	Yes
Exit/Open	Yes	No	No	No	No	Yes
Remote Access	No	No	No	No	No	Yes
Edit Access Control	Yes	No	No	No	No	Yes

To give all Access Levels access to all features, click on the **All Yes** button.

To give all Access Levels access to none of the features, click on the **All No** button.

To give all Access Levels typical access to features, click on the **Default** button.

When Partial access is selected, the following forms are affected :

- Irrigation (edit zone times only)
- Scenes (edit levels only)
- Schedules (edit time, day and GA level only)
- Access Control (edit users only)
- Special Days (add/delete Special Days only)

Options Tab

The options for displaying disabled components and features (menu items and tool bar buttons) are :

- **Show** : display them as normal
- **Hide** : hide disabled Components and features
- **Show as Disabled** : show disabled Components with greyed out text

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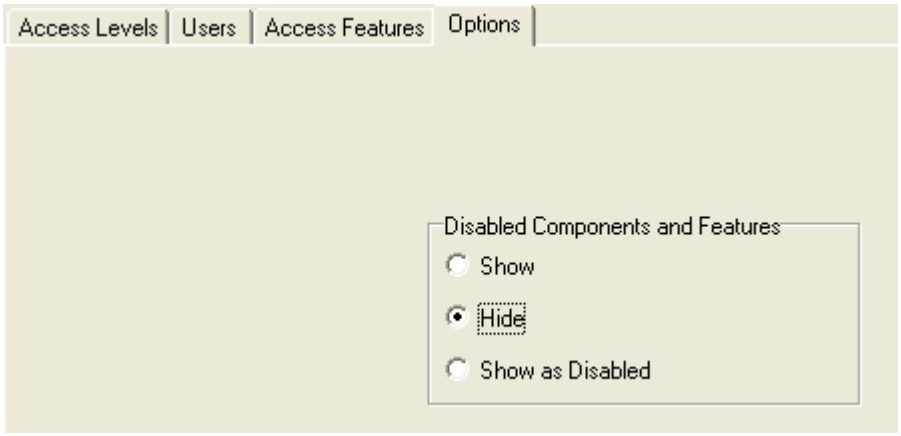

Notes

At least one user must always have access to the Access Control feature, otherwise it is possible to be permanently locked out of the software.

The lowest Access Level (default name "Anonymous") and the highest Access Level (default name "Administrator") must always be enabled, otherwise it is possible to be locked out of the software for some time. You will be prevented from having these levels enabled only some of the time.

7.10.2 Access Level Editor

The Access Levels Editor is accessed via the Access Control Manager and allows the editing of the properties of an Access Level.

The properties which can be set are :

- Name : this is the name of the Access Level
- Time : this is the time at which the Access Level is available
- Day : this is the day(s) on which the Access Level is available

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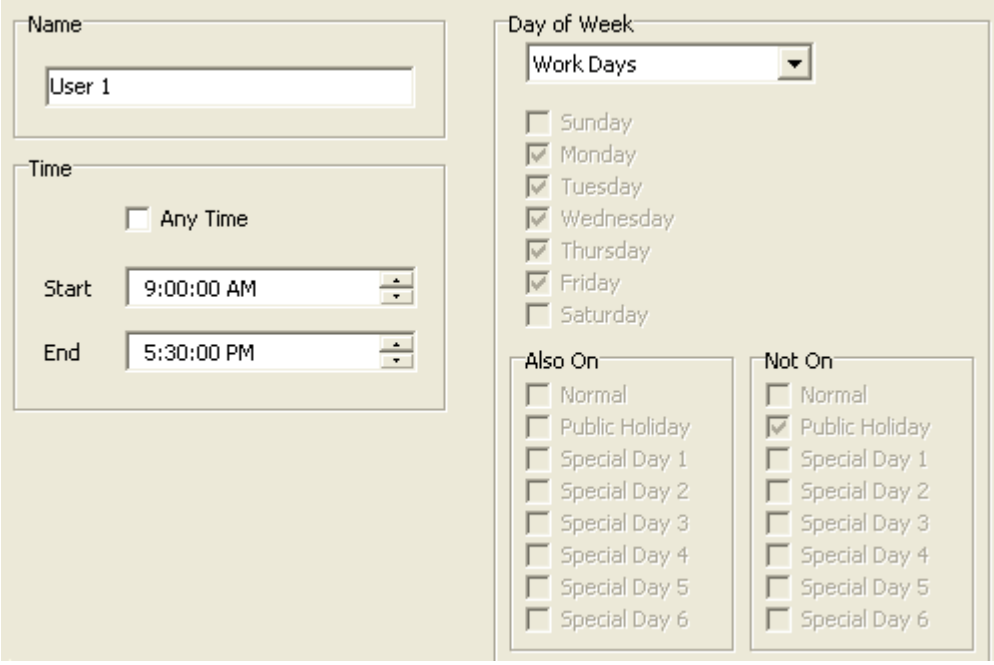


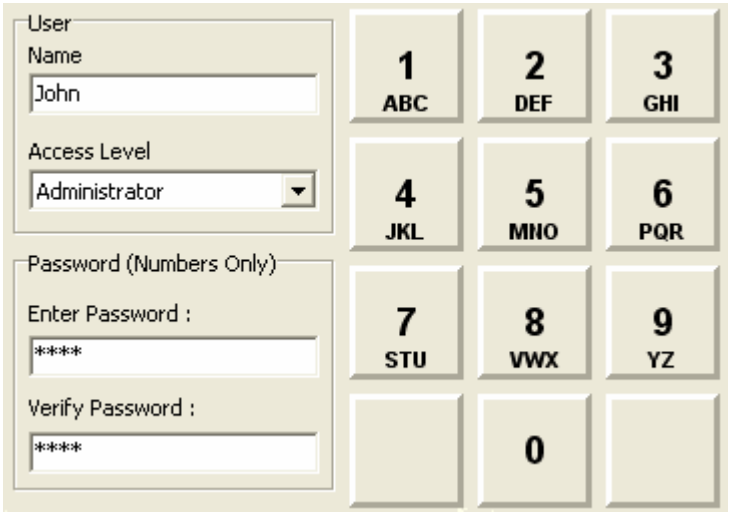
See also Special Days

7.10.3 Users Editor

The Users Editor is accessed via the Access Control Manager and allows the editing of the properties of a user.

The properties which can be set for each user are :

- Name : this is the name of the User
- Access Level : this is the Access Level for the User
- Password : this is the password for the User.



Note that the password must be a number, and can be entered by clicking on the Password boxes and typing numbers or by clicking on the numeric buttons on the right. The buttons have letters on the bottom which may be useful in remembering the password.

The password must be between 4 and 12 digits.

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7.10.4 Log-in / Log-out

To gain access to the Schedule Plus software, it may be necessary to log-in. This involves entering a password by clicking on the numeric buttons on the screen then clicking on the OK button :

The user will be asked to log-in if they try to access a page that has an Access Level which is higher than their Access Level. Alternatively, you can :

- click on the **Log-in / Log-out** button on the Tool Bar
- select the **Log-in / Log-out** button in the Options menu
- click on a component with the Log In Special Function set

To log-out :

- click on the **Log-in / Log-out** button on the Tool Bar
- select the **Log-in / Log-out** button in the Options menu
- click on a component with the Log Out Special Function set

7.10.5 Conversion of Old Version Files

If you load an older Schedule Plus Project file which used passwords only for Access Control, Schedule Plus will automatically create a user for each password and assign an Access Level to each page which was password protected. As it is impossible to know exactly what the user will require, a single Access Level is used for all Users and Pages.

7.11 Special Days

Special Days are days which are different in some way from a "normal" day. An example is public holidays, days with extended trading hours or special functions.

Special Days can be selected in Schedules so that different behaviour can be set for different days. Special days can also be used for Access Control.

See also Templates

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7.11.1 Special Day Manager

To open the Special Days manager either :

- click on the **Special Days** menu in the **Edit** menu
- click on the **Special Days** button on the tool bar
- click on the **Special Days** button in the Schedule Manager

Calendar Tab

The Calendar Tab allows you to add or delete Special Days.

To add a Special Day :

- select the required month (using the **Previous** and **Next** buttons)
- double click on the required day
- the Special Day Editor will appear which can be used to select the desired Special Day(s)

To delete a Special Day, repeat the above process and set the Special Day type to **Normal**.

To delete all Special Days before the selected month, click on the **Remove Old Days** button.

To delete all Special Days, click on the **Remove All** button.

Day Types Tab

The Special Day Types are Normal, Public Holiday and Special Day 1 to Special Day 6. The Special Day 1 to 6 can be assigned any name you wish.

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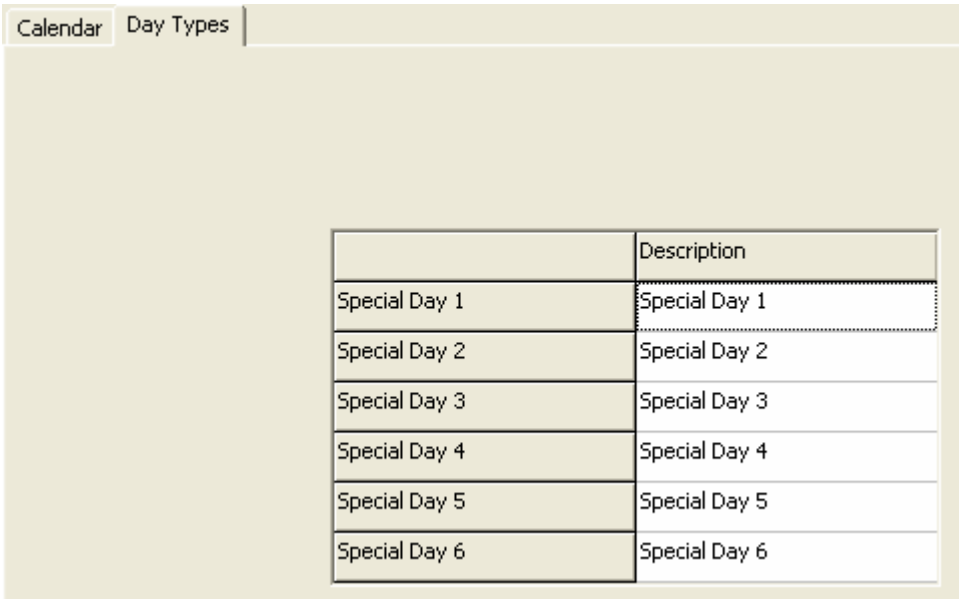
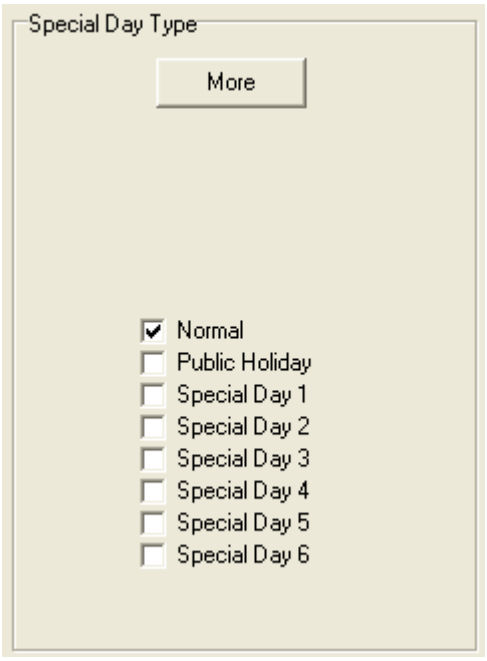


7.11.2 Special Day Editor

The Special Day Editor allows you to set the Special Day type(s) for a particular day or range of days. The Special Day Editor is opened from the Special Day Manager by double clicking on the required day.



Most of the time you will want to just set the Special Day type(s) for the selected day. In this case, you just need to select the Special Days (Normal, Public Holiday etc) and then click on **OK**.

To access the more advanced Special Day creation features, click on the **More** button. The form will change to :

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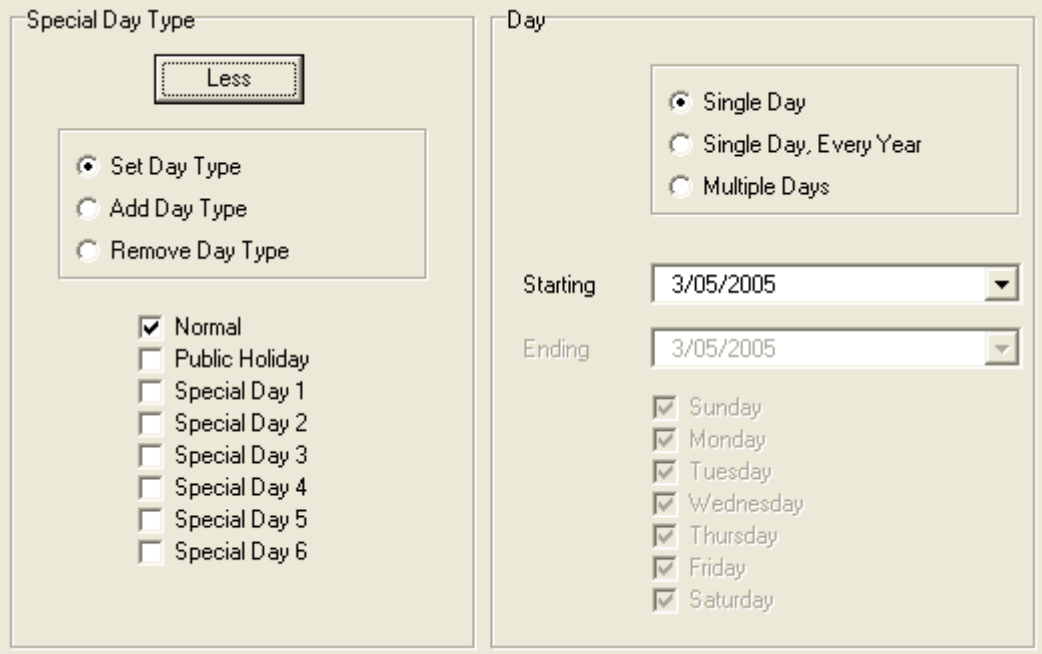

To set the same Special Day type every year :

- Select the **Single Day, Every Year** radio button
- Select the **Ending** year
- Select the **Special Day Type**(s)
- Click on **OK**

To set the Special Day type for a group of days :

- Select the **Multiple Days** radio button
- Select the **Starting** date
- Select the **Ending** date
- Select which days of the week are applicable (if relevant)
- Select the **Special Day Type**(s)
- Click on **OK**

Options for setting the Special Day Type

Most of the time you will want to set the Special Day Type of the selected day(s) to be the Special Day Type(s) which have been selected. In this case, the **Set Day Type** radio button needs to be selected and the existing Special Day Types for the selected day(s) will be replaced with the new ones.

Sometimes you may want to add a Special Day Type to selected days without removing the Special Day Types already assigned. For example, you may want to add a "School Holidays" Special Day Type to a range of days, but not erase the "Public Holiday" Special Day Type from any days in the range. In this case, the **Add Day Type** radio button needs to be selected.

Alternatively, you may want to remove a particular Special Day Type from selected days without affecting any other Special Day Types. In this case, select the **Remove Day Type** radio button.

7.12 Irrigation

7.12.1 Irrigation Control

Irrigation can be implemented using Schedules, but it is much simpler to use the in-built Irrigation Manager.

Typically it is necessary to activate various solenoids for particular times to ensure that everything receives the correct amount of water. Different parts of a garden may need different amounts of

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water, which may change depending on the time of the year.

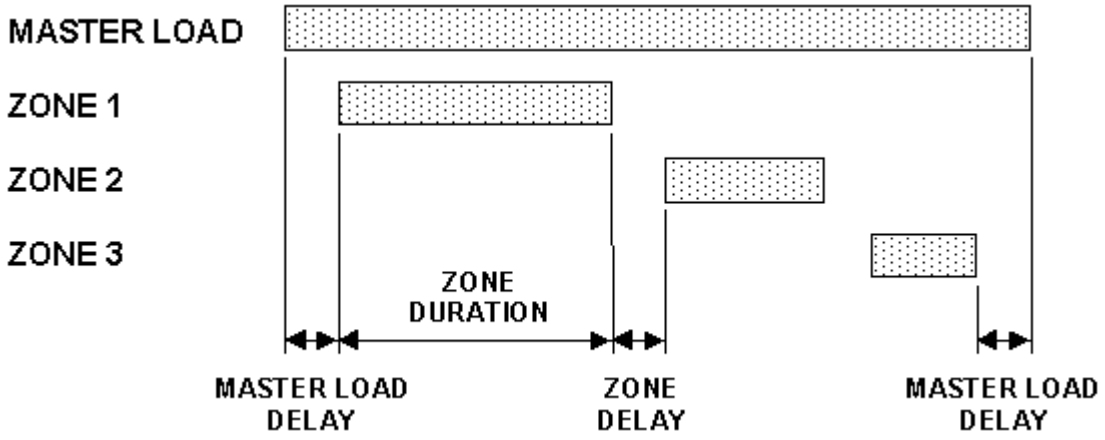
There are a few terms used with regard to Irrigation Control which need to be defined :

- **Irrigation Zone** : This is a load which can be controlled by the Irrigation Controller. It is generally a solenoid which controls water flow.
- **Irrigation Program** : This is a sequence of events, corresponding to switching on each Irrigation Zone for a selected amount of time. It may be desirable to have one Irrigation Program for watering gardens which is activated once per week, and another for watering lawns which is activated every three days. It may also be desirable to define different Irrigation Programs for different seasons (e.g. shorter watering cycles during winter).
- **Master Load** : This is like an Irrigation Zone, except that it is on during the entire Irrigation Program. For example, a pump or master solenoid may need to be switched on as the Irrigation Program commences and stay on until the program completes.
- **Valve Types** : A **Level Control** valve (solenoid) stays on only while the voltage is applied to it. A **Pulse On / Off** valve needs a pulse applied to one connection to open the valve and then another pulse applied to a different connection to close the value.
- **Zone Delay / Overlap** : The zone delay is the delay between zones which may be needed to give the valves time to close properly. The Zone Overlap is when the next zone starts before the previous one has completed. This can be used to reduce water hammer.
- **Rain Delay** : A rain delay is a Schedule which is used to enable the Irrigation Control at some time in the future. This is normally used to disable the Irrigation for a few days after it has rained, and then re-enable it later.

A typical Irrigation program consists of a sequence of events such as :

- Switch on Front Lawn Irrigation for 10 minutes
- Delay for 2 seconds
- Switch on Back Lawn Irrigation for 12 minutes
- Delay for 2 seconds
- Switch on Side Lawn Irrigation for 8 minutes

Some of the above terms are illustrated in the diagrams below. In these examples, each which show a single Irrigation Program, there is a Master Load and three Irrigation Zones being switched on and off, one after the other. The first example, there is a delay between the zones.



In the second example, the zones "overlap", and are on at the same time briefly.

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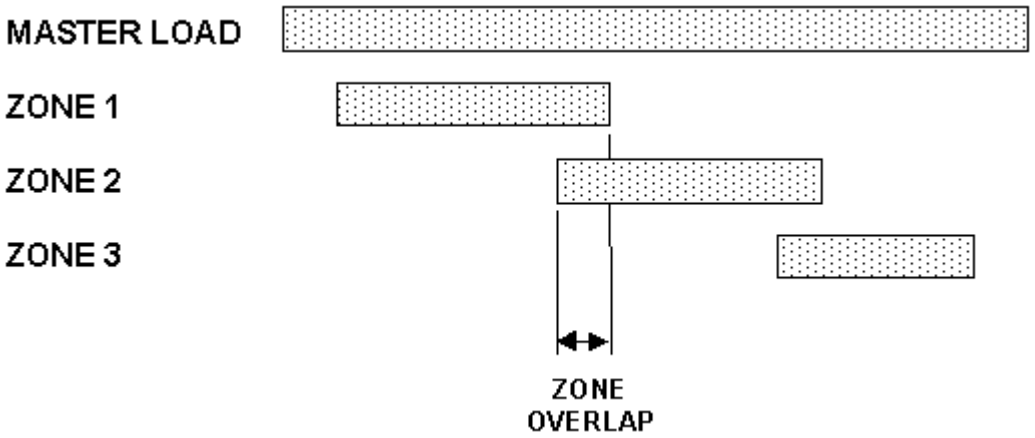

The Irrigation Controller allows the set-up of Irrigation Programs and Zones to perform the tasks required for irrigation of gardens and lawns.

Using Irrigation Control

The steps for using Irrigation Control are :
1. Enter the Irrigation Programs required
2. Select the Irrigation Zones which have to be controlled
3. Select any Master Loads which have to be controlled
4. Enter the time for each Zone in each Program
5. Select a Master Enable group if required
6. Enter Schedules to trigger the Irrigation Programs
7. Add any Components to pages for
   - manual control of Irrigation Zones
   - manual triggering of Irrigation Programs
   - enabling the Irrigation Control (via the Master Enable Group)
   - displaying the Irrigation zone time
8. Set up a Rain Delay button on a page

Example

A house has three zones for watering lawns, and four for watering different parts of the garden.
The watering requirements are :
In Summer, each of the lawn zones is watered for 20 minutes, every two days
In Summer, each of the garden zones is watered for 15 minutes, every three days
In Spring and Autumn, each of the lawn zones is watered for 10 minutes, every 5 days
In Spring and Autumn, each of the garden zones is watered for 10 minutes, every week

This means there are four separate Irrigation Programs required. A Group Addresses level tag should be created for each Irrigation Program.

There are a total of 7 Irrigation Zones. A Group Address tag should be created for each Irrigation Zone, preferably in the Irrigation Application (number 71 hex).

It will also be necessary to create 4 Schedules to trigger each of the Irrigation Programs on the right days.

Notes

A Master load can be added which does not control anything, but the Group Address can be used by a Component to indicate that the Irrigation is running.

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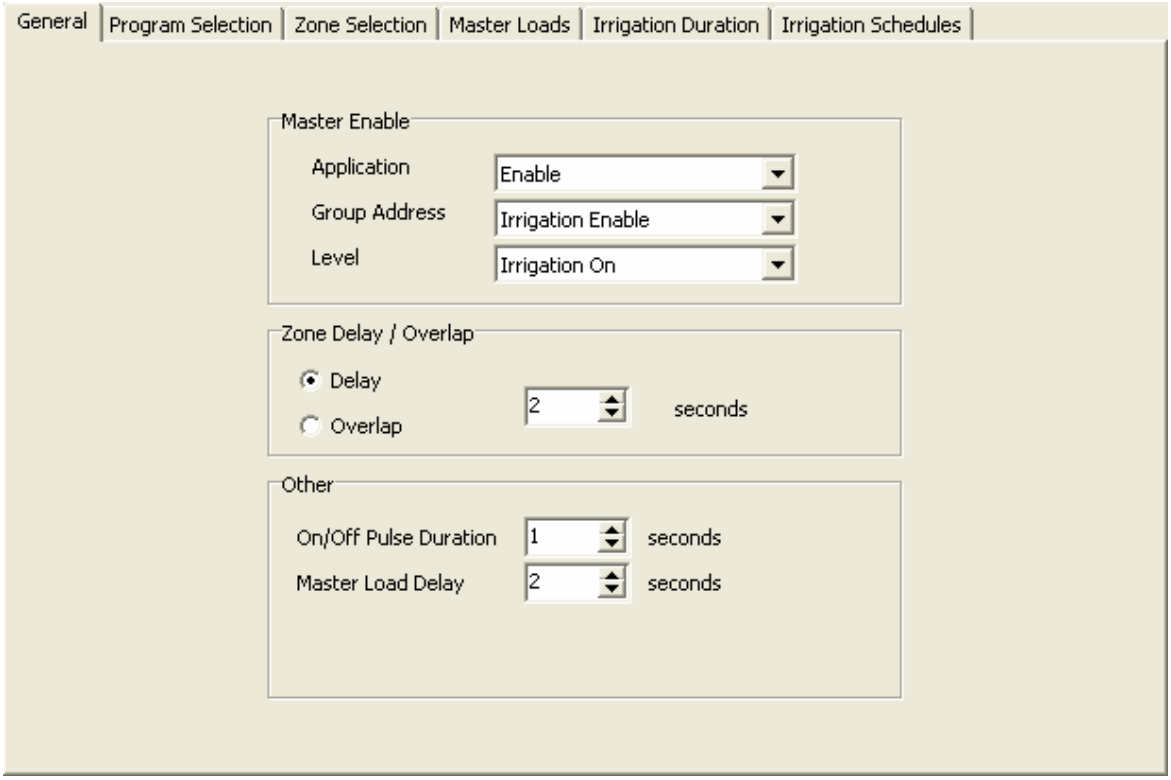
7.12.2 Irrigation Manager

To show the Irrigation Control dialogue box, select the **Irrigation** item from the **Edit** menu, or select the button on the Toolbar.

General Tab

The first tab is a general screen dealing the Master Enable group, the delays and the pulse duration and master load delay.



Master Enable : this sets the Application, Group Address and Level for enabling the Irrigation Control. If this Group Address is set to any other level, the Irrigation Controller will be disabled. It is recommended that the Enable Control Application ($CB) be used for this purpose. If the "Unused" Group Address is selected, there will be no Master Enable, and the Irrigation Controller will always be enabled. Note that if the Master Enable Group is disabled while an irrigation cycle is underway, the cycle will be terminated. See also Power Failure Recovery.

Zone Delay / Overlap : this sets the Zone Overlap or Zone Delay (see above).

On / Off Pulse Duration : this sets the pulse duration for pulsed zone loads.

Master Load Delay : this sets the duration of the Master Load Delay (see above).

Program Selection Tab

The second tab is for Irrigation Program selection. An Irrigation Program is a sequence of events corresponding to switching on each Irrigation Zone for a selected interval of time. It may be desirable to have one Irrigation Program for watering gardens which is activated once per week, and another for watering lawns which is activated every three days. It may also be desirable to define different Irrigation Programs for different seasons to take natural variations in rainfall into account (eg. longer watering times during summer).

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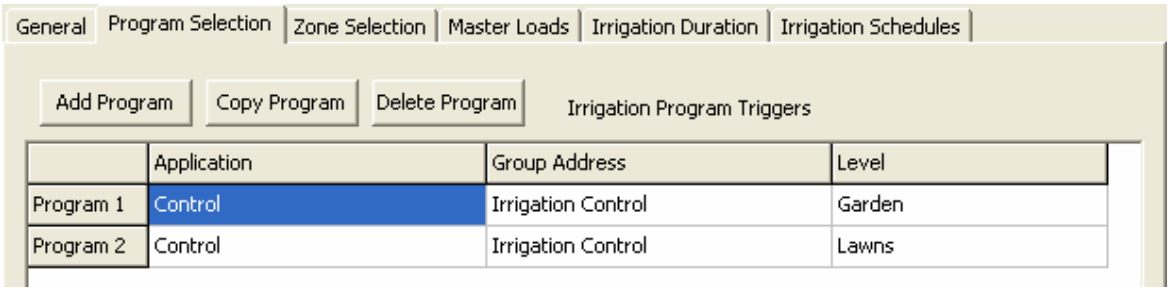


To add a new Irrigation Program, either click on the **Add Program** button, or select one from the list and click the **Copy Program** button.

It is necessary to select the Application, Group Address and Level for the trigger of each Irrigation Program. This trigger is used to start the Irrigation Program. This trigger can either be set with a component or a Schedule to start the Irrigation program. It is recommended that the Trigger Control Application ($CA) be used for this purpose.

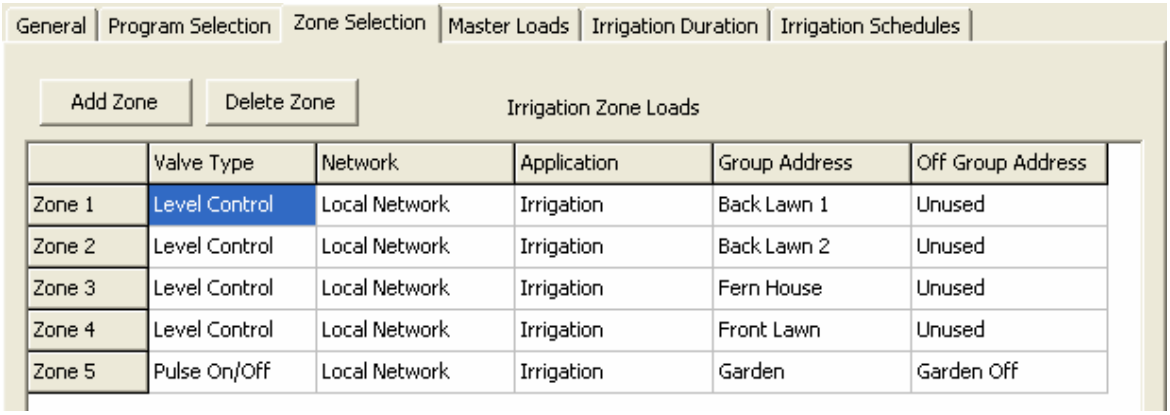
The duration for each zone in the program is set on the Irrigation Duration tab (see below).

Zone Selection Tab

It is often necessary to limit the duration and location of irrigation in a typical system. You may want to water one part for an hour and another for two hours. Another requirement might arise because you might want to water one patch of ground at a time because you don't have enough water pressure to cover them all at once.

The idea of Irrigation Zones is used describe these requirements in a way that the Irrigation Controller can use. The only thing which can be controlled in a typical irrigation system is a valve which can be turned on or off. This "open and close" action serves a particular area; when a valve is opened some sprinkler heads will deliver water (either by spraying it or dripping it onto the soil). The area involved when this valve is opened is referred to as a "Zone". So the thing we control is the valve and by knowing what piping is connected and which areas will be watered we can label our Zone appropriately.

That is the purpose of the Zone Selection screen; to define which valve we are controlling and associate it with the type of valve (Level or Pulse) and the Network, Application and Group Address which will ultimately serve to water that Zone.



The same Irrigation Zones are used for each Irrigation Program. To add a new Zone, click on the **Add Zone** button and enter the required Valve Type, Network, Application and Group Address. It is recommended that the Irrigation Application ($71) be used for this purpose. If the Valve Type is a Pulse On / Off type, then it is necessary to enter the Group Address for both the on and off control. A Level Control Valve only needs the one Group Address selected.

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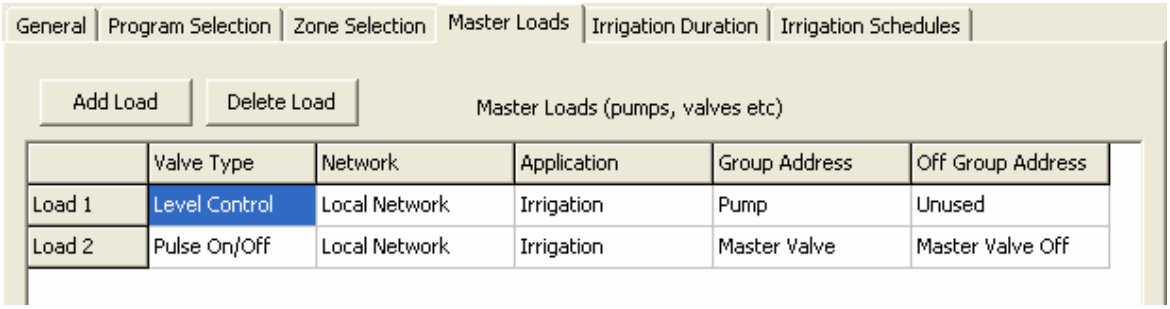
Master Loads Tab

The fourth tab is the Master Loads tab. This is used to describe things which must be on during the whole Irrigation Program. Examples of this sort of thing are pumps or master solenoids which have to be energised to allow Irrigation to take place.



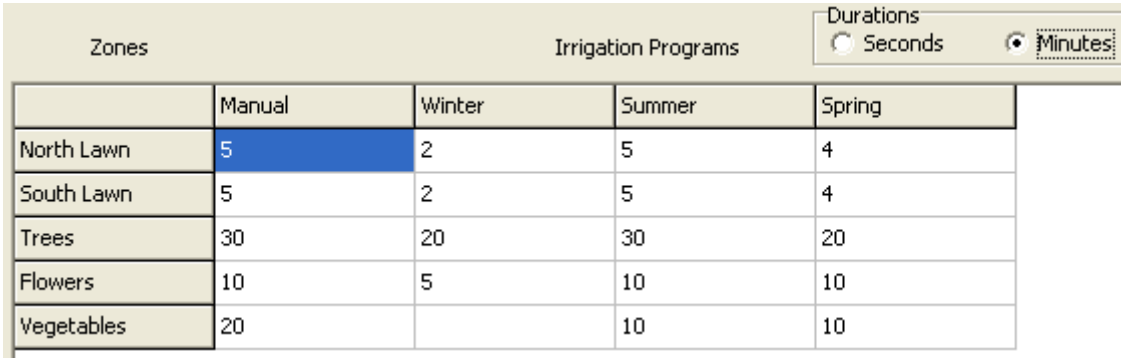
	Valve Type	Network	Application	Group Address	Off Group Address
Load 1	Level Control	Local Network	Irrigation	Pump	Unused
Load 2	Pulse On/Off	Local Network	Irrigation	Master Valve	Master Valve Off

To add a new Load, click on the **Add Load** button and enter the required Valve Type, Network, Application, Group Address and Off Group Address (if applicable). It is recommended that the Irrigation Application ($71) be used for this purpose.

Irrigation Duration Tab

The Irrigation Duration tab shows the combination of the Irrigation Zones and the Irrigation Programs. The duration of each Irrigation Zone can be set for each Irrigation Program. It is possible within one given Irrigation Program to switch on a Zone for a different time period or exclude it entirely using a mix-and-match approach in this table.

The durations can be entered in seconds or minutes by selecting the **Seconds** or **Minutes** buttons. To change a duration, click on the cell for the desired Zone and Program. Click again to edit the value. The Up and Down arrows can be used to change the number, otherwise type in a number.



	Manual	Winter	Summer	Spring
North Lawn	5	2	5	4
South Lawn	5	2	5	4
Trees	30	20	30	20
Flowers	10	5	10	10
Vegetables	20		10	10

The values in the **Manual** column are used when manually running a single irrigation zone using a Special Function.

Irrigation Schedules Tab

The Irrigation Schedules are set up using the Schedule Manager. To open the Schedule Manager, click the **Edit Irrigation Schedules** button. To set up an Irrigation Schedule, create a schedule for the required time and days, and have it set the required Irrigation Program trigger.

To automatically create a default schedule for each of the Irrigation Programs, click on the **Create Irrigation Schedules** button. These can then be edited by clicking the **Edit Irrigation Schedules** button.

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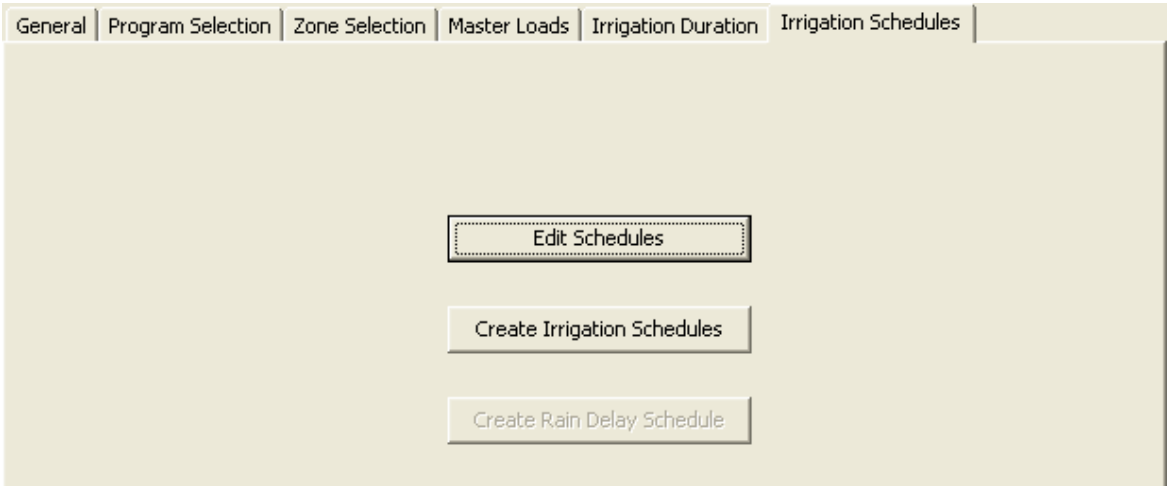
When it rains, you may want to disable the Irrigation Controller for a number of days to avoid wasting water. To create a Schedule to implement a rain delay feature, click on the **Create Rain Delay Schedule** button. This creates a Schedule which enables the Irrigation Controller by setting the Master Enable level. To use the Rain Delay feature, use the Tools button to add a Rain Delay component to your project. When this button is clicked, the Irrigation Controller will be disabled (by setting the Master Enable group to off) and the Schedule Editor will be opened to allow you to set when the Rain Delay Schedule will re-enable the Irrigation Controller. If you already have a Schedule controlling the Irrigation Enable group, the **Create Rain Delay Schedule** button will be disabled.



See also
Clock showing the Irrigation Timer
Rain Delay tool

7.13 Alarms

An Alarm can be used to alert the user. An Alarm can be started by :
- pressing on a Component with the Alarm On Special Function set
- a Schedule with the Alarm On Special Function
- a Group Address triggering a Component by Remote Control

Like a regular Alarm Clock, the Alarm can also be switched off, and there is a Snooze option, which will switch the alarm off for a certain period.

The Schedule Plus software plays the system default beep when the Alarm is on. To set the desired sound, use the Windows Control Panel.

The Project Options can be used to set :
- how often the Alarm beep is played
- how long it will continue
- how long the Snooze period is

7.14 Testing, Debugging and Operation

7.14.1 Connecting to C-Bus

C-Gate has to be running and correctly configured to communicate with C-Bus before it can be used by Schedule Plus.

To connect to C-Bus, select the **Connect to C-Bus** sub menu from the **Options** menu. This will connect you to C-Bus using the details set-up in the C-Bus Project. The Program Options allows you to select which IP Address and Port is used to connect to C-Gate.

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The software will take several seconds to read the current state of the C-Bus network. Once connected, all C-Bus buttons on the software will show and control the state of C-Bus Group Addresses.

7.14.2 Load Monitor

The Load Monitor shows every Network, Application and Group Address used by Schedule Plus and its state. It allows you to toggle the state of the Group Address by double clicking on the Group in the list.

To display the Load Monitor :
- Select the **Load Monitor** item from the **Edit** menu; or
- Click on the **Load Monitor** button on the Tool Bar

To refresh the display, click on the **Refresh** button on the Tool Bar or select the **Auto Refresh** check box to automatically refresh every 10 seconds.

The Load Monitor also allows for the long term monitoring of loads to determine how long they have been on for the purposes of preventative maintenance and for determining energy usage. Note that this data is only accumulated while Schedule Plus is running. If the Schedule Plus software is switched off for some time, the calculations will assume that the loads were off during that time.

The columns of data displayed are :
- **Load** : this is the name (C-Bus Tag) of the Group Address
- **Level** : this is the Level of the Group Address
- **Recover ?** : this shows whether the load is to have its level Recovered after a power failure
- **Monitor ?** : this shows whether the Load is being monitored or not (see below)
- **Last Reset** : this is the time that the load On Duration was last reset
- **Power Rating** : this is the Power Rating (in Watts) of the load (use of this is optional)
- **Power** : this is the power being used now (eg. a 150W load running at 50% will be 75W)
- **Energy** : this is the total Energy used by the load since the last reset
- **On Duration** : this is how long the load has been on (> 0%) since it was last reset
- **Threshold** : this is the duration at which an alarm will be raised (see below)
- **On** : this is the percentage of the time that the load has been on since it was last reset

Note that Power and Energy values are calculated, they are not measured values.

Selecting a Load

To select a Load, click on the load in the table. To select more than one load, select one load, then :
- click on another load while holding down the SHIFT key to select all of the loads in between; or
- click on individual loads while holding down the CTRL key

Monitoring

The Schedule Plus software monitors the state of any loads which are selected (these have "yes" in the Monitor column) every 10 seconds and accumulates the data in a database. The database is a Comma Separated Value (CSV) file with the same name as the project file, but with a ".csv" extension. This file can be opened with a database or spreadsheet if required.

The **On Duration** column shows how long the load has been on. This will be updated every 10 seconds if :
- the load is selected as being monitored
- the load is on (> 0%)
- C-Bus is Connected

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Alarm

If the **On Duration** reaches the **Threshold** value, an alarm will be raised. For example, if you set the Threshold to 1000 hours, then when the load has been on for 1000 hours, the alarm will be raised. If the Threshold value is set to 0, it will be ignored, and no alarm will be raised.

Click on the **Edit Action** button on the Tool Bar to select what action(s) you want to have happen for the alarm. The options are :

- Error Message : this shows a standard error message box to let you know that a threshold has been exceeded
- Select Page : this selects a particular page when a threshold has been exceeded
- Special Function : this executes a Special Function a the threshold has been exceeded
- Send E-Mail : this sends an E-Mail message when a threshold has been exceeded. Enter the e-mail address in the box.

Once an alarm has been raised, no more alarms will occur until the alarm has been reset. To do this, click on the **Reset Load Alarm** button on the Tool Bar or the **Reset Load Alarm** item in the Options menu of the main form.

Tool Bar

The buttons on the Tool Bar are explained below.

- **Monitor Load** : this activates or de-activates the monitoring of the selected load(s)
- **Power Fail Recovery** : this activates or de-activates the power fail recovery of the selected load(s)
- **Set Duration** : this allows you to set the duration that the load has been on for (it will also automatically set the Energy value)
- **Power** : this allows you to set the load power (optional)
- **Threshold** : this allows you to set the load duration threshold for the alarm (optional)
- **Edit Action** : this allows you to set the action which will be performed when a load duration threshold is exceeded
- **Reset Load Alarm** : this re-enables the load alarm (see above)
- **Refresh** : this refreshes the display
- **Load Summary** : this generates a report of the monitored loads
- **Auto Refresh** : this automatically refreshes the display every 10 seconds.
- Group selection drop down list : this allows you to select whether you want to display all Groups, just Monitored Groups or just Groups which have exceeded their Threshold

Power Failure Recovery

The **Power Fail Recovery** button on the tool bar activates or de-activates the power fail recovery of the selected load(s).

See also Logging Events

7.14.3 Load Summary

To create a Load Summary report :

- Select the Load Summary button from the Monitored Loads dialogue box; or
- Select the **File | Reports | Load Summary** menu item

The Load Summary report lists all of the Monitored Loads and their properties :

- Run Duration (since last reset)

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- Energy Used (since last reset)
- Time when last reset
- Whether the load has exceeded its duration threshold.

The format of the report can be set to HTML or Text in the Program Options dialogue box. The report file is saved to the Project directory for later reference.

7.14.4 Power Failure Recovery

When the Schedule Plus software starts up, it assumes all Group Address Levels are off (level 0). When C-Gate is connected, the levels from the Networks are read, and then Schedule Plus will show the correct levels for the Group Addresses.

Following a power failure, C-Bus recovers the Group Address Levels from the Output Units. When C-Gate connects to C-Bus, it also reads the Levels from the Output Units.

There are several circumstances where a Group Address may not exist in any Output Units. Generally, this is where Group Address is used to control something other than a load :

- Triggering a Scene
- Enabling a Schedule
- Enabling the Irrigation control
- Triggering an Irrigation Program
- Status indication (eg. showing whether a door is open)

In this case, when power is lost, the Level of the Group Address will also be lost.

In order to recover the levels following a power failure, the Schedule Plus software can write the Levels of selected Group Addresses to a file on a regular basis, and then re-load the values when it starts up. To select the Group Addresses to recover, use the Load Monitor.

The Power Fail Recovery file is written :

- every 10 minutes, while C-Bus is Connected
- when the Project is Saved
- when the Load Monitor dialogue box is closed

The Power Fail Recovery file is read :

- when the Project is Opened
- when C-Bus is connected

Notes

When a Schedule or the Irrigation control is edited, the Enabling Group has its Power Failure Recovery set automatically.

If a Group Address is being pulsed at the time of Power Failure, the Return Level will be set when power is reapplied.

If a Group Address is being ramped at the time of Power Failure, the ramp end Level will be set when power is reapplied.

See also Schedule Catch-Up

7.14.5 Operation Mode

To disable editing functions, the Schedule Plus software can be placed in Operation Mode by either:

- selecting the Operation Mode item from the **Options** menu; or
- by pressing **CTRL + S**
- clicking on any component with the Operation Mode Special Function property set.

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To get out of Operation Mode, you can
- press **CTRL + S** ; or
- click on any component with the Exit Operation Mode Special Function property set.

Operation Mode does the following things :
- Components are activated by a left **or** right mouse click (this is useful for running on Touch Panel PCs)
- The menus and tool bars are hidden
- The Window is set to the same size as the Project Screen Size

If the Project Screen Size is the same as the Computer Screen Size, there will be no program border or caption bar. To make the project fill the screen, but still have the program border and caption bar, set the Project screen size to have a height and width a few pixels less than the computer screen size.

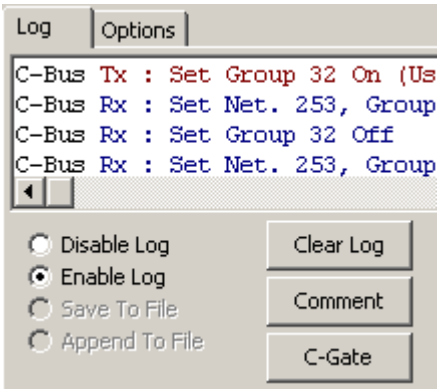
Note that the Operation Mode cursor image can be set in the Program Options dialogue box.

See also
Program Options
Logging
Command-Line Parameters

7.14.6 Logging Events

An event log can be used to monitor the events which have occurred. This can be very useful for debugging a project. To show the event log, select the **Show Log** item from the **Options** menu.

Log Tab



There are four radio buttons which determine the state of the logging :

- **Disable Log** – This disables the logging
- **Enable Log** – This enables the logging
- **Save to File** – This starts a new log and saves all logged events into the selected file
- **Append to File** – This appends all logged events to the end of the selected file

The **Clear Log** button clears all entries in the log (but not in the file).

The **Comment** button allows you to put a comment into the log file.

The **C-Gate** button allows you to send a specific command to C-Gate. Click the **C-Gate** button, enter the command and click on **OK**.

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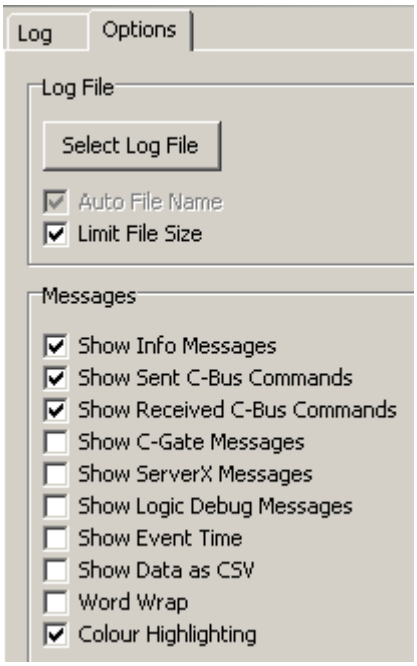
Options Tab



There are check boxes on the Options Tab which enable various options :

- **Show Info Messages** – This enables the logging of information messages.
- **Show Sent C-Bus Commands** – This enables the logging of commands sent from the software.
- **Show Received C-Bus Commands** – This enables the logging of commands received from C-Bus.
- **Show C-Gate Messages** – this displays messages to and from C-Gate.
- **Show ServerX Messages** – this displays messages to and from ServerX.
- **Show Logic Debug Messages** - this displays Logic Log Messages
- **Show Event Time** – When selected, this appends the date and time of each event.
- **Show Data as CSV** – This logs all data as Comma Separated Values to allow the log file to be imported into a spreadsheet, database or other program
- **Word Wrap** – this allows the text to wrap around in the display if it is too long to fit on one line.
- **Colour Highlighting** - this controls whether the logged commands are shown in different colours

The **Select Log File** allows the desired file name to be selected. Alternatively, if the **Auto File Name** check box is selected, the file name will be automatically generated from the date and time, and hence will be different each time. If the **Limit File Size** option is selected, the file will be closed when it gets to 100,000 lines (usually around 2MB) and another log file will be started.

Log File Data

All messages written to the log contain a prefix with the type of log message.

All sent C-Bus commands in the log will be prefixed by "Tx" which is short for transmit.

All received C-Bus commands in the log will be prefixed by "Rx" which is short for receive.

The Schedule Plus log shows the source of all transmitted commands, which will be one of :

- User click (a user has clicked on a component)
- Schedule
- Scene (triggered by external source)

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- Logic

If the command was sent as part of a Scene, this will be shown.

For example, a log line showing :

09/05/2005 12:16:31 PM C-Bus Tx : Set Kitchen On (User Click)

means that at 12:16:31 PM on 09/05/2005, the "Kitchen" group was switched on, and the source of the command was a user click.

09/05/2005 12:19:01 PM C-Bus Tx : Ramp Porch to 60% over 4s (Schedule "Night Time"/Scene "Welcome Home")

means that this command was originated by Schedule "Night Time" which triggered Scene "Welcome Home".

09/05/2005 12:21:12 PM C-Bus Tx : Set Basement Light 1 On (Logic Line 40)

means that the command was initiated by line 40 of the logic code.

See also Command-Line Parameters and Load Monitor

7.14.7 Checking the Project

A check of the project can be performed by selecting the **File | Reports | Check Project** menu item. This verifies that there are not any problems which may cause the project to behave in a manner that is not intended. Any problems found are classed as Warnings or Errors. Warnings are generally not critical, but time should be taken to read them. Errors are more severe and should be corrected before use.

The format of the report can be set to HTML or Text in the Program Options dialogue box. The report file is saved to the Project directory for later reference.

The messages, and their meanings are given below :

Item	Meaning	Corrective Action
Warning 100	The project has scenes which have the same trigger. This means that several scenes will be triggered at once.	Edit the scenes to change the triggers.
Warning 101	An Irrigation Program has no Schedules triggering it. The Irrigation Program can only be started manually.	Create a Schedule to trigger the Irrigation Program.
Warning 102	A Component has a page link to the page that it is on.	Change the page link.
Warning 104	There are large stretched images used.	Use an image editor to pre-scale the images to the desired size.
Warning 105	A component is covering, or partly covering a component which may change appearance.	Move one or more components.
Warning 106	There are large Components using alpha blending.	Switch off alpha blending and/or use an image editor to get the desired effect.

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Warning 107	The component has multiple actions. This may cause unexpected behaviour when this component is activated.	Check that the actions are all required, and change if needed.
Error 200	The project has scenes which trigger each other. Once one scene has been triggered, the scenes will trigger each other indefinitely.	Edit the scenes to change the triggers.
Error 201	The average update rate of the Monitor components it more than once per second. This will cause excessive C-Bus network traffic.	Reduce the update rates.
Error 206	A page can not be reached from the start-up page or from the time-out page.	Add a page link to the page.
Error 208	One component is completely hidden by another.	Move or delete the one or more components.
Error 209	Part of the component is off the screen.	Change the position or size to bring it back onto the screen.
Error 210	A component is covering another component which has different C-Bus control. This will cause different actions, depending on where the component is pressed.	Move one component or make the C-Bus settings the same in both components.
Error 211	A component is covering another component which has a different Page Link. This will cause different actions, depending on where the component is pressed.	Move one component or make the Page Links the same in both components.
Error 212	A component is covering another component which has a different Special Function. This will cause different actions, depending on where the component is pressed.	Move one component or make the Special Functions the same in both components.
Error 213	A component has an Application of 255 (FF hexadecimal), which is invalid.	Change the Application number, or change the component to have a C-Bus type of Unused.
Error 214	A component has a Group Address of 255 (FF hexadecimal), which is invalid.	Change the Group Address, or change the component to have a C-Bus type of Unused.
Error 215	It is not possible to navigate to all pages from a particular page.	Add some buttons to the page with page links to appropriate pages or add a back button.
Error 216	Two or more users have the same password.	Change one or more user passwords.
Error 217	An Access Level does not have features of the Access Levels below it. This may cause undesirable system behaviour.	Change one or more user Access Level features.
Error 218	Two or more Access Levels have the same name.	Change one or more user Access Level names.
Error 219	Two or more Schedules have the same name.	Change one or more user Schedule names.
Error 220	A Group Address does not have Power Fail Recovery set. The value of this Group Address will be lost after a power failure. If this is enabling a Schedule, the Schedule will be disabled following a power failure.	Enable the Power Failure Recovery for this Group Address.

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If an error message refers to a Component number on a particular page, the Component can be found as follows :

- select the page
- select the **Edit | Select | Select Component No** item
- enter the number of the component wanted
- click on **OK**

Or the **Options | Action Components | Show Numbers** menu item can be used to display the Component number of all Components which have an action.

See also Project Summary and Good Design Practices

7.14.8 Project Summary

A summary of the project can be produced by selecting the **File | Reports | Summary** menu item. The summary is used to get an overall view of what is in the project to make sure that everything that should be controlled is being controlled.

The summary contains the following information :

- Project details.
- Installer details.
- List of all Networks and Applications used.
- List of all Groups and which Components they are controlled by.
- List of all Scenes and the actions within each scene.
- List of all Schedules with the time, day and event.
- List of all Group Addresses and which Schedules they are controlled by.
- List of all Components and what they control
- Summary of the Logic
- List of all Special Days
- List of all Access Control levels and users
- List of all Load Monitor Groups
- List of all Power Failure Recovery Groups
- List of all images used by the Project.

The format of the report can be set to HTML or Text in the Program Options dialogue box. The report will be saved in the same directory as the project for later inspection.

See also Check Project, Printing

7.15 Schedule Plus Designs

7.15.1 Good Design Practices

A well designed Schedule Plus Project will be easier for the user to use and will be much more visually appealing. The following suggestions may help to produce a well designed project.

Project Errors

The Check Project function can be useful for identifying many design errors. It is recommended that you ALWAYS check the project for errors before completion and follow the suggested changes. This will avoid some subtle, but potentially serious, problems with your Project.

Fonts

The number of different fonts should be minimised. The use of different fonts, styles and sizes can create an effective visual impact, but using too many will be distracting and counter-productive.

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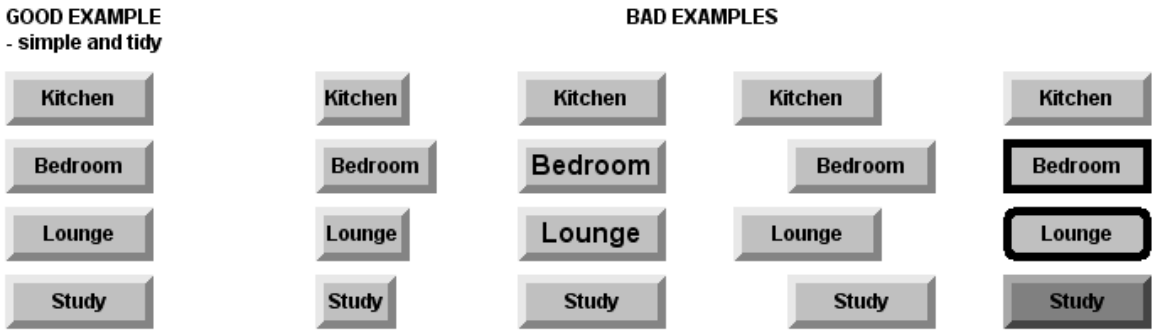
Components

Generally speaking, larger Components and icons are easier to see and use.

Where Components perform similar functions (eg. Page Links or controlling C-Bus), they should look similar and have similar sizes.

Where there are groups of related Components, they should be aligned to each other.

Avoid placing too many Components on a single page unless necessary, as it can be difficult to find what is needed.



Page Layout

The most important thing with regard to page layout is being consistent. The following sorts of things should be the same on each page, where possible :

- Heading position
- Fonts
- Colours
- Position of the navigation buttons (particularly the "back" buttons, if used)

Project Structure

The most common graphical interface similar to Schedule Plus for the average user would be that presented by internet browsers. These tend to feature a "Back" button to return to previously visited pages. Although this scheme can be used to navigate through any project, other schemes such as the example project illustrated throughout this Guide may be used (where a page can have buttons to return to intermediate levels in the project.) Virtually any logical system can be used to navigate, and once a user is familiar with a particular scheme the exact details are unimportant. The key is to make the scheme logical and consistent.

Another idea worth enforcing is that of a limit on the number of levels of menus supported. A project should have no more than three levels of depth for comprehensibility. If a greater depth is chosen, the user can become disoriented and frustrated at being unable to find a particular page. If the "three deep" rule is adhered to this is most unlikely.

The Schedule Plus Software offers the options of password protected screens and this is a particularly useful feature for protecting critical items.

Other

If a page has a clock on it, the page will be re-drawn every second. On pages with clocks, it is best to avoid things which require a lot of computer processing, unless you have a fast computer :

- large JPEG images which require a lot of processing to de-compress
- images which have been re-sized (it is best to re-size the image with a graphic editing program and used the re-sized image in Schedule Plus

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- a lot of components on a page
- large polygons with many sides or 3D ellipses

7.15.2 Fulfilling User Requirements

Prior to commencement, the installer should visit the customer with a laptop and show examples of sample Schedule Plus projects and rough out the customer's requirements freehand on the Pro-Forma forms provided.

The success of a Schedule Plus project is best judged on the basis of how well it meets the requirements of the user. These requirements must be captured with the customer before and during the design of an actual project.

The project should follow the order indicated below:

- Design the C-Bus Network(s) if not already installed
- Show examples of sample projects to the customer
- Use the storyboard to design the flow from one page to another
- Design scenes
- Design schedules
- Implement at office
- Bring a laptop and "simulate" the project or run "live" on an existing Network
- Make changes and repeat the above steps if necessary
- Install Schedule Plus and commission

Basic C-Bus Setup

A set of drawings showing the devices to be controlled by C-Bus should be available for reference. The tags created by the C-Bus Installation Software are available to the Schedule Plus project under File | Project Details on the Project tab.

Story boarding

Once the lighting groups have been assigned, the overall look of the project should be sketched out using the storyboard sheet (printed and copied to produce an adequate supply). The idea is to show how one page flows to the next and how the pages are interconnected.

The precise look of the pages need not be reproduced at this stage.

Scene Design

The combination of various loads, associated levels and ramp rates that comprise the scenes in a project can create an effective lighting effect, which differentiates C-Bus from conventional lighting. In addition to the aesthetic aspects of scenes their use in scheduling should not be overlooked.

Schedule Design

Following this, schedules should be planned out on the Schedule proforma. Some illustrations of example schedules may provide a better understanding of how they can be used. The purpose-designed scenes should also be incorporated into schedules.

Initial Implementation

Once the overall requirements have been recorded, the project should be designed at the office and brought back when complete.

Testing

The Operation Mode can be used to demonstrate how the project will look when installed.

Iteration

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The Schedule Plus Software provides a quick convenient interface for designing control layouts. The prototypes of the project can be run on a laptop at the most convenient place for the customer to see the project. The customer should then be encouraged to explore two or three options during this step to engender "ownership" of the design and help guarantee a satisfied customer.

Commissioning

The Schedule Plus software should be installed, and the operation of each C-Bus control (C-Bus Buttons, Scenes, Schedules) should be verified.

The customer should be instructed on the use of Schedule Plus including :

- Navigating between pages
- Controlling C-Bus
- Controlling and editing Scenes
- Enabling and editing Schedules
- Access Control (passwords)

The customer should also be provided with an archive of the Project file for safe keeping.

7.16 C-Gate

C-Gate must be used for connecting to C-Bus. It provides a point of control for one or more applications which wish to control and monitor C-Bus simultaneously. Refer to the C-Gate manuals for more details.

To find the minimum version of C-Gate required for use with this software, click the **Help | Software Properties** menu item.

To use C-Gate with this software :
1. Start C-Gate.
2. Select the **Connect to C-Bus** item from the **Options** menu.

The C-Gate connection progress is shown on the status bar at the bottom of the screen (unless the software is in Operation Mode). If C-Gate has not yet synchronised all networks, this connection process may take some time.

See also Command-Line Parameters

7.16.1 C-Gate Algorithm

The way that Schedule Plus uses C-Gate to communicate with C-Bus is as follows. On start-up :
1. Connect to C-Gate
2. Set the C-Bus project to use
3. Set any operation modes required
4. Get a list of networks
5. Open each network
6. Poll each network to find when they are synchronised
7. As each network is synchronised, do a "tree" to retrieve the levels

The above process can be observed using the Log.

No C-Bus commands will be transmitted to a network until it is synchronised. Any C-Bus commands sent before a network is synchronised will be queued and the levels will be set once the network is synchronised. Once all networks are synchronised, the state of each network will be verified once every 5 minutes, and another "tree" will be performed every hour.

The status of a Component's network can be displayed using the **Options | Show Component Label | Network Status** menu item.

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The status of all of the Networks can be viewed by selecting the **Options | Show Network States** menu item. The possible network states are :

- **New** - the network has not been opened yet (usually caused by a failure to open the network)
- **Open** - the network has been opened, but the synchronisation process has not started
- **Sync** - the network is being synchronised
- **OK** - the network has been synchronised and is ready for use
- **Error** - the network has an error
- **Closed** - network has not opened (usually caused by a failure to open the network)

For more information on the usage of C-Gate, refer to the C-Gate documentation.

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8 Menu Items

FILE MENU

New Project – create a new project
Open – open an existing project
Reopen – open a previously opened file.
Save – Save the project
Save As – Save the project using a different name
Archive
- Save Backup - Save a Backup copy of the Project
- Export to Archive – Export the Project to an Archive
- Import From Archive – Import a Project from an Archive
Open Template – Open a project template
Add Template Contents – Add a Template page to the Project
Re-Add Template Contents – Add a Template page to the Project which has been used before
Save As Template – Save the Project as a Template
Save Page As Template – Save the page as a Template
Convert Files - Convert Project files from old format to new format
Create Desktop Shortcut – create a shortcut to the software on the desktop.
Project Details – set the Project Details
Resize Project – adjust the size of the screen
Reports
- Check Project – check the project for errors
- Project Summary – generate a summary of the project
- Load Summary - generate a report of the Monitored Loads
- User Manual - generate a User Manual automatically
- Save Screen – save a JPEG or Bitmap of the Schedule Plus screen image
- Save Screen with Border – as above, but with a border around the image
- Save All Screen Images - as above, but for all Pages (JPEG only)
Project Files - open the Windows Explorer to show the project files
Exit – exit the program

EDIT MENU

Undo – cancels the previous action(s)
Delete – delete the selected component(s)
Cut – cut the selected component(s)
Copy – copy the selected component(s)
Paste – paste a copy of the copied component(s)
Paint Format – paint the format of the copied component
Copy Groups - copy the Group Address of the Primary Selection to the Secondary Selection(s)
Component Properties – set the properties of the selected component
Select
- Select All – select all of the components on the page
- Deselect All – de-select all of the components on the page
- Select Component No – select a component by its number
- Select Hidden Components – select any components on the page which are invisible
Size
- **Height** – Adjusts the height of the secondary selections to the primary selection
- **Width** – Adjusts the width of the secondary selections to the primary selection
- **Size** – Adjusts the width and height of the secondary selections to the primary selection
Align
- Align – align the position of the selected component(s)
- Align Left - align the left sides of the selected components
- Align Top - align the top sides of the selected components
- Align Right - align the right sides of the selected components
- Alight Bottom - align the bottom sides of the selected components
Component Order – change the drawing order of the selected component

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- Move Back - move selected Component back one position
- Move to Back - move selected Component to the back
- Move Forward - move selected Component forward one position
- Move to Front - move selected Component to the front
Place Component – place a new component (all are listed)
Move onto Page – move all components onto the page (if they are off the page)
Lock Components – this prevents any components from being moved or resized
Label Components - this automatically places a label under each selected component
Page
- Delete Page – delete the current page
- New Page – add a new page
- Add Template Contents – add (load) an existing page
- Duplicate Page – make an exact copy of the existing page
- Edit Page Properties – set the page properties
- New Theme Page - create a new Theme Page
Project Details – set the Project Details
Edit Schedule – edit or add a schedule
Edit Scene – edit a scene
Edit Irrigation – open the Irrigation Controller
Edit Special Days – open the Special Days Manager
Edit Access Control - open the Access Control editor
Load Monitor - open the Load Monitor

OPTIONS MENU

Connect to C-Bus – connect to C-Bus to allow control of the network
Show Network States - shows the connection state of the networks
Connect to WWW – connect to the World Wide Web
Run Scheduler - start or stop the Scheduler
Sync to Schedules - Synchronise Scheduled Groups to Schedules
Log In - Log-in / Log-out
Default Font – set the Default font to be used when placing components
Operation Mode – set the program in Operation Mode
Program Options – set the options
Show Log – display the Log.
Reset Load Alarm - resets the Load Monitor Alarm
Refresh Images - re-load all images used by the project
Toolbars
- Hide Toolbars – hide the tool bars
- Show Toolbars – show all Tool Bars
- Restore Toolbars – Restore all Tool Bars to their default position
Enable Error Messages - enable all Error Messages
Show Component Label
- Show Numbers - show the number of all Components
- Show Numbers of Action Comp - show the number of all Components which have an Action
- Show Actions - show the Action of all Components which have an Action
- Network Status - show whether the Network for each C-Bus Component is on-line
Grid – set the placement grid
JPEG Quality - sets the quality of the image for Internet Access and for saving the screen image
- Low (Small File) – lowest setting (worst image)
- Medium – medium setting
- High – good quality image with moderate file size
- Best (Large File) – highest setting (best image)

HELP MENU

Contents – show the contents of the help file
Search for Help on – search the help file for a particular topic

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How to Use Help – instructions about using the help system
FAQ - Frequently Asked Questions
Clipsal Web Site – this opens the Clipsal Integrated Systems web site
On-line Registration - connect to the Clipsal Integrated Systems on-line registration web site
Tip of the Day – this shows the Tip of the Day dialogue box.
What's New – this shows the What's New dialogue box.
Software Properties - this shows how many Pages, Components, Scenes, Schedules etc Schedule Plus supports
About – shows details of the program

Note that many of these items are also available on the Tool Bars.

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9 Other Help Sources

9.1 Help File

The Schedule Plus help file provides some additional information about the Schedule Plus software. The help file can be accessed from the **Help** menu or from any dialogue box with a Help button (in this case, you will be taken directly to the relevant help topic).

9.2 FAQ

There is a Frequently Asked Questions (FAQ) help file distributed with the Schedule Plus software. This should be read for more information on how to perform common tasks.

9.3 Tip of the Day

The Software has many features that you may not know of. The Tip of the Day is designed to introduce a few of these ideas to you.

The Tip of the Day dialogue box will be displayed when you start the software. You can also display it by selecting the **Tip of the Day** item in the **Help** Menu.

The **Show on Startup** check-box allows you to set whether you want it displayed each time the software starts.

The left and right arrows allow you to scroll through the tips.

If a tip has an associated Help file entry, a button with a question mark will appear. Clicking on this will provide more information about the selected tip.

See also What's New

9.4 Whats New

The Software has many new features introduced with each new release. The What's New dialogue is designed to introduce a few of these ideas to you.

The What's New dialogue box will be displayed when you start the software. You can also display it by selecting the **What's New** item in the **Help** Menu.

The **Show on Startup** check-box allows you to set whether you want it displayed each time the software starts.

See also Tip of the Day

9.5 CIS Web Site

From time to time, the CIS Web Site may have Schedule Plus software updates and/or new Frequently Asked Questions topics posted.

Click on http://www.clipsal.com/cis to go to the CIS web site.

The C-Bus Forums also contain a lot of useful information : http://www.cbusforums.com/forums/

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10 Documenting the Installation

Planning the Project

The designer of the Schedule Plus project must capture the requirements of the user before commencing the actual creation of a Schedule Plus project. Some useful pro-forma forms are shown in this section.

The Story Board Pro-Forma can be used for sketching out the pages required for the Project.

The Scene Pro-Forma has two parts, the triggering and the actions part. Any scene can be triggered by a Group Address being set to a Level. The actions section specifies what is to be turned on, to what level and how fast.

To use the Scheduling Pro-Forma fill in the area to be controlled and draw a line from the start to finish time required. This list is used in the Scheduling editor accessed via the **Edit | Schedule | Edit Schedule** menu item.

See the Tutorial Project for examples of how the Pro-Formas are used.

Documenting the Results

The Screen Images can be saved so that they can be put into your project documentation.

The overall project can be summarised with the Project Summary.

A User Manual can be generated automatically to provide to the user of the Schedule Plus Project.

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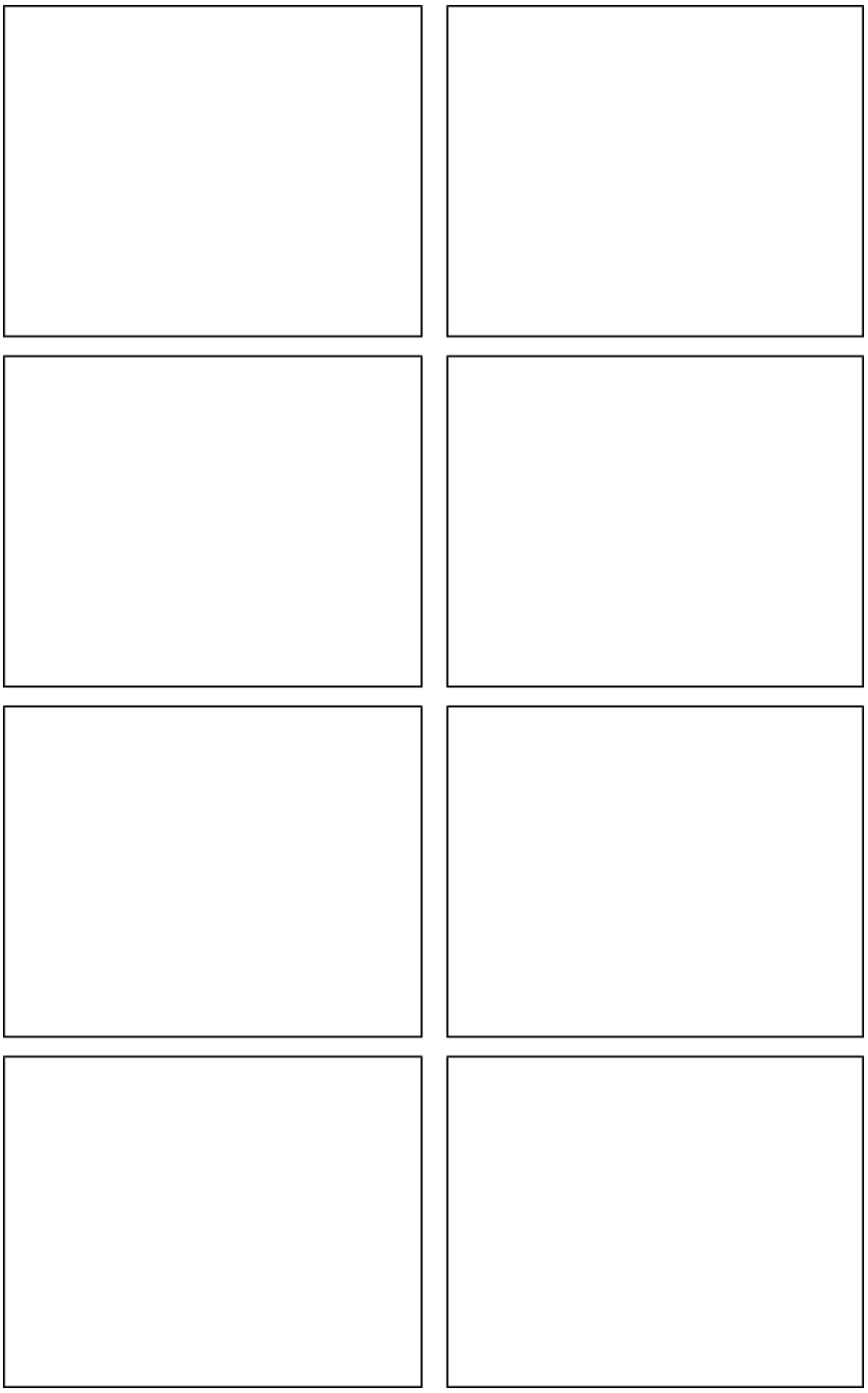
10.1 Story Board Pro-Forma



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10.2 Scene Pro-Forma

Scene Name	Load(s)	Level(%)	Rate(sec)

10.3 Schedule Pro-Forma

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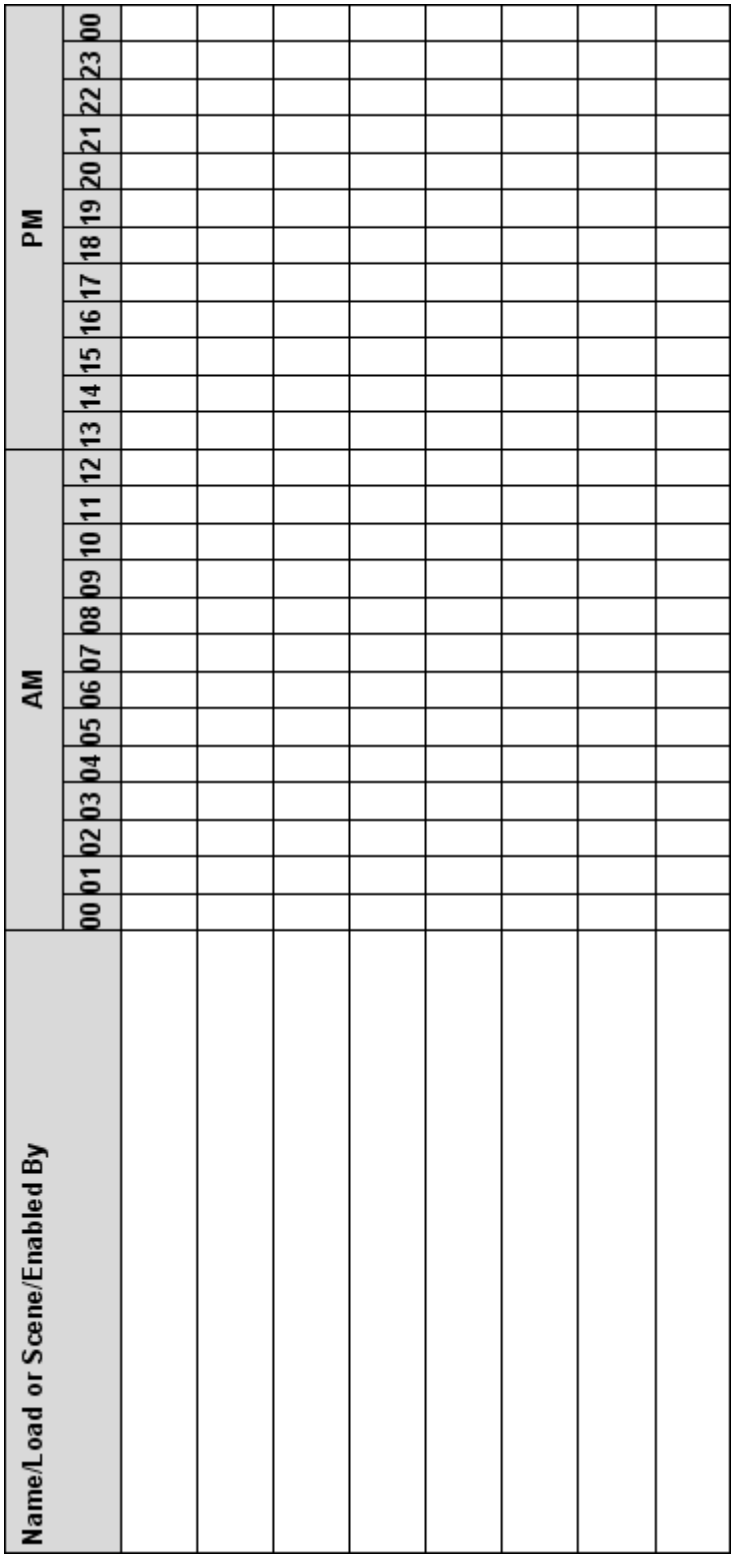

10.4 Saving the Screen Images

The screen (page) images from the project can be saved individually to a file. To save a single screen image :

- Select the required page
- Select the **File | Reports | Save Screen …** or **File | Reports | Save Screen with Border …** menu options.
- Select either JPEG or bitmap format

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- Select the required directory
- Enter the file name
- Click on the **Save** button

The image will then be saved to the selected file, in the selected format, with or without a border (as required). Repeat the above process for each page you wish to save an image of.

To save all screen images with borders as JPEG files, select the **File | Reports | Save All Screen Images** menu item. The screen images will be saved in the Project directory as Page1.jpg, Page2.jpg etc.

Note that if you are saving the image as a JPEG file, the JPEG image quality can be selected with the **Options | JPEG Quality** menu items.

10.5 User Manual

To automatically create a basic User Manual for the Schedule Plus Project, select the **File | Reports | User Manual** menu item. This will automatically generate an HTML manual with the following details :

- Page Images (with each Component numbered)
- List of Components and their functions for each page
- List of Scenes (if used)
- List of Schedules (if used)
- List of Access Control Levels and Users (if used)
- List of Irrigation Control details (if used)

Notes :

- only Components which have an action associated with them will be listed. Other Components are generally of no interest to the user.
- Theme Pages are listed separately from the Project Pages.
- Theme Page Components are not listed on the Project Pages.
- the manual JPEG image quality can be selected with the **Options | JPEG Quality** menu items.

The manual will be saved to the file **User Manual.htm** in the Project directory. To provide the manual to a user, you will need the **User Manual.htm file** and the page images (**Page1.jpg** etc).

The manual can be edited to suit your requirements using any HTML editor. Alternatively, the manual can be opened with a word processor, edited and saved as another format if required (for example, Microsoft Word allows you to open as HTML then save as a doc file).

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11 Tutorial

11.1 Before Starting

Before using the Schedule Plus software to create a real Project, it is recommended that you explore the features of the software and create practice Projects. The concepts to explore include :

- Creating Pages and setting their Properties
- Adding Components to Pages and setting their Properties
- Manipulating Components
- Using Themes
- Scenes
- Schedules
- Access Control
- Special Days
- Irrigation Control

11.2 Creating a Personal Template

Before starting on the creation of your first real project, you should create a Template which you will use for your future Projects. The benefit of doing this is that you can avoid having to do the same work every time you start a new project.

Creating a New Project

The first step is to create a new Project. If the Schedule Plus software is already running, select the **File | New Project** menu item. Otherwise, starting the Schedule Plus software will bring up the New Project wizard.

Select the **Create a New Blank Project** button.

Click on **Next**.

Select the required screen size and click on **Next**.

Select any C-Bus project. This will be changed when you create a real Project, so the choice is irrelevant. Click on **Next**.

Click on **Next** again.

Setting Up Personal Details

As the project will be different each time, leave this blank for now. When you are creating a real project, you should fill in this information. Click on **Next**.

Fill in your details and click on **Next**.

Select any preferred options, then click on **Next**.

Click on **Next**.

Select your location from the list. If your location is not in the list, enter the details manually and click on the **Add to Database** button. Click on **Next**.

Select your time zone and Daylight Savings details. Click on **Finish**.

Setting up the Project Appearance

If you have found a Theme which you like, then add it to your project by selecting **File | Add Template Contents** and selecting the desired Theme template file. Alternatively, you can create your own Theme Pages and Components.

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Add a tools page by selecting **File | Add Template Contents** and selecting the desired tools template page.

If you want to have particular Pages in your Project each time (for example, an introduction page or main menu), then add these now. It is worthwhile spending a little time now to make these attractive, as it will be used many times in the future.

Saving the Project

Click on the **File | Save as Template** button. Select all check boxes and click on **OK**. Select a file name and click on **OK**.

Re-using the Project

Whenever you create a new project, you can load the template you have just created.

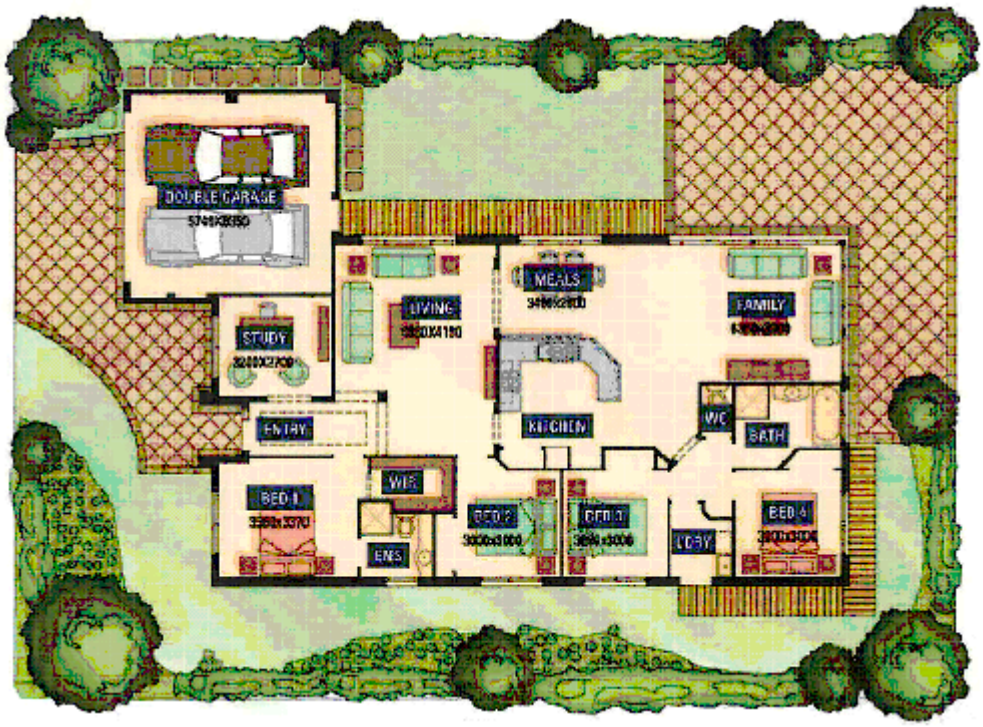
Click on **File | New Project**. Select **Create a New Project Based on a Template**. Click on the **Browse** button to select your template. The next time you open the New Project wizard, the template will already be in the drop down list.

Click on **Next** so that you can alter any necessary details. When complete, click on **Finish**.

11.3 Tutorial Project

Now that we have seen what Schedule Plus could do in general terms, let's have a look at how you would do some of these things in an example situation. (The project for this tutorial is in the **Guide Example** project).

C-Bus is installed in the house shown below. We want to have control of lighting in some main areas, scene setting throughout the house and scheduling for other functions.



The main areas of interest are:

- Living room
- Meals area
- Family room

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- Kitchen
- Entry
- Porch
- Double Garage
- Bedroom 1
- Deck
- Garden lights
- Garden sprinklers
- Study
- Bedroom
- Laundry
- Bath
- Toilet

Having identified the various areas under control we use the C-Bus Tool Kit to create a project and tags to implement the basic layout of the house. The units in the Network are programmed according to normal C-Bus practice and ultimately will be transferred and tested in final commissioning.

11.4 Story Board

A "Story Board" can be used to sketch out how many Pages are needed, which Components will be required and which Page Links will be needed to link them together.

Here is an example of the hand drawn storyboard for the first few pages of the project (this is drawn on the Story Board Pro-Forma) :

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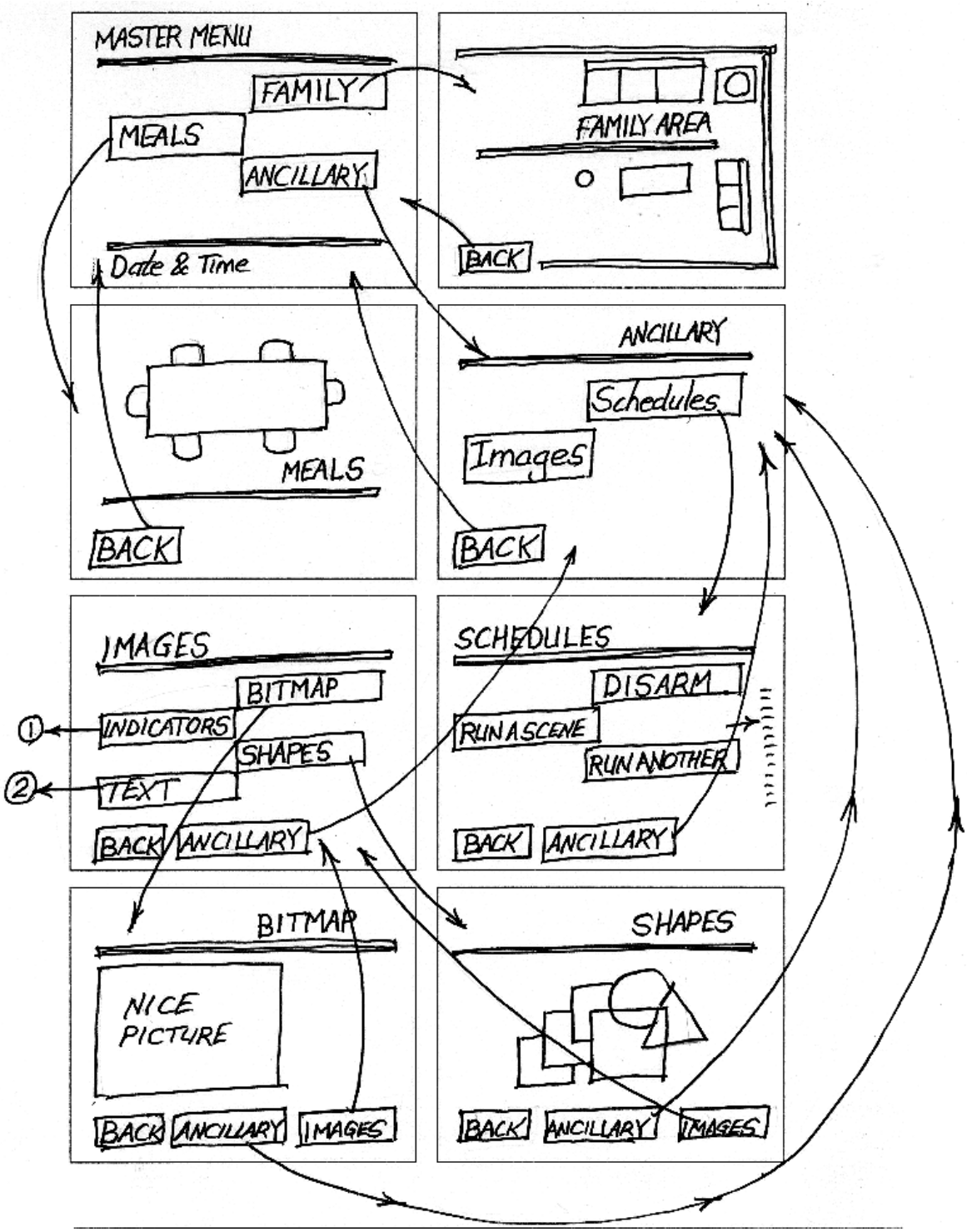

The first page in the project is a "Master Menu" page that points to three other pages; the "Family" page, the "Meals" page and the "Ancillary" page. Each button has an arrow drawn to the relevant page showing the transfer of control. This page, which is the default page for the project shows the date and time at the bottom in an area akin to a footer on a printed page.

The Family page shows an expanded view of the relevant section of the building plan with sofas, occasional tables and the ceiling light, which is controlled by Group Address "Family 1" (abbreviated as FA1 in this sketch.) There is another light, which is a down light over a picture and this is controlled by "Family 2"(abbreviated as FA2.) Another light is found over the table in the corner and this one is controlled by a Scene called "Living 1&2 ON". This page has a "Back to Main" button which returns control to the Master Menu page. The arrow drawn from this button to

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the page shows this link.

The second button on the Master Menu page points to the "Meals" area. The page consists of an expanded view of the corresponding section on the building plan. The only active area is the tabletop, which controls Group Address "Kitchen 3" " (abbreviated as M1 for Meals 1, but further consideration showed that it really was a Kitchen light.) For ease of use the entire table area is touch sensitive. The touch sensitive areas need not be restricted to the image of the light or other load. Here again, an arrow indicates a link from the Back button to the Master Menu. (Note that in refining the project all such buttons will be given the same name, which will probably be "MAIN" – this drawing does not have to be accurate but should capture the "feel" of the project as well as any details which occur to the installer as he sketches).

The third button on the Master Menu points to the "Images" and "Schedules" pages. Each button points to the corresponding page.

The Images page can show an "Indicators" page, a "Shapes" page, a "Text" page and a "Bitmap" page, (not shown.) Each of these pages would have a third button along the bottom to return control to the Images page.

Note that in all these layouts there are three possible locations for navigation buttons, the last one being lower right. This is typically to be used to return control to an intermediate level page such as the Images and Controls page. As a rule a project should not contain more than three "levels" of pages. By providing only three positions for return buttons this rule is enforced by the page layout.

Regardless of which page the user is looking at, the buttons have the same meaning: Lower Right returns to the next page up, Lower Middle refers to the one above that and Lower Left returns to the topmost page. This rule is not enforced in any way (as perusal of the sample projects attest) but represents good design practice.

The next page illustrated here is the Schedules page. The buttons on this page act to control schedules and scenes, which are described in the next section. The "Disarm Schedules" button sets a Group Address in the Control Application and all schedules (except KitchenWeekdayDinnerON & KitchenWeekdayDinnerOFF) are triggered by this Group Address. This button provides a convenient way to arm or disarm schedules throughout the project.

The buttons which are linked to scenes use the "Key Function" option for the buttons. (This function is accessed by double clicking the button, the C-Bus tab and the Key Function sub-tab and choosing the scene button).

The last page is the "Shapes" page which simply displays a selection of shapes which can be used in a project.

In an actual project several pages could be required to describe the whole project. The layout chosen here supports up to four buttons per page and if the restriction on three levels of hierarchy is observed the total number of pages in such a project would be theoretically 21 pages. If a layout with eight buttons per page were used, the project could have 73 pages.

Once the overall storyboard is sketched out, the schedules and scenes need to be designed.

11.5 Pages

The page for the family room is shown here. Note that you can actually cut out the relevant portion of a floor plan drawing and use it in a Schedule Plus layout if convenient. The drawing cutout is imported as a bitmap and then controls and components are overlaid.

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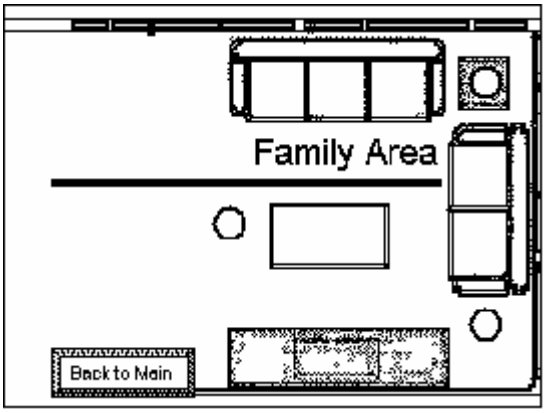
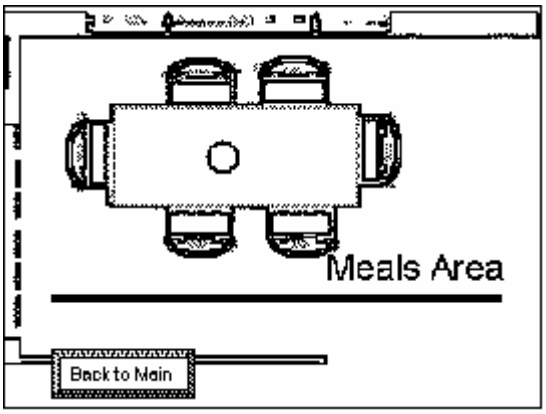


Here is the page for the meals area. The meals area has one light over the table. For ease of use the entire table top is active area to turn the light on, so accurate mouse placement is not required.



11.6 Adding Scenes

The scenes in a project may be used to create a mood by ramping lights up or down at predetermined rates. Another use for scenes is to enable several loads to be controlled at once for the purposes of scheduling.

The scenes shown in the example below are used in conjunction with the schedule section which follows. Some example scenes which could be implemented by Schedule Plus as shown below (this is drawn on the Scene Pro-Forma) :

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Scene Name	Load(s)	Level(%)	Rate(Sec)
Living 1&2 ON	Living 1, Living 2	100	8
" OFF	"	0	8
Kitchen 1, 2 & 3 ON	Kitchen1, Kitchen2, Kitchen3	100	4
" OFF	"	0	0
Kitchen 1, 2, 3 & 4 ON	Kitchen1, Kitchen2, Kitchen3, Kitchen4	100	4
" OFF	"	0	0
Family 1&2 ON	Family 1, Family 2	100	4
" OFF	Family 1	0	8
"	Family 2	0	16
Welcome Home	Living 1	100	0
(Triggered by	Living 2	100	4
Automatic Door [CA])	Kitchen 1, Kitchen 2	100	4
	Family 1	80	8
	Family 2	70	10
	Porch	0	10 mins
	Bedroom 1	60	10 mins
Movie	Living 1	10	1 min
(Triggered by	Kitchen 1	0	30
IR REMOTE [CA])	Anteroom	10	30
	Entry	0	0
	Porch	0	0
	Deck	0	0

11.6.1 Welcome Home Scene

The Welcome Home scene is initiated by entry to the house. All main access lighting to common living areas is activated. Outside lights are switched off after a suitable period of time. Minimal lighting is also established in the bedroom area. It can be directly triggered by Schedule Plus.

In this scenario we imagine that a Group Address called "Automatic Door" on the Control Application is set when the garage door is closed. This is what triggers the scene.

11.6.2 Movie Scene

This scene provides a lighting configuration for movie watching. Some dim lighting is maintained in

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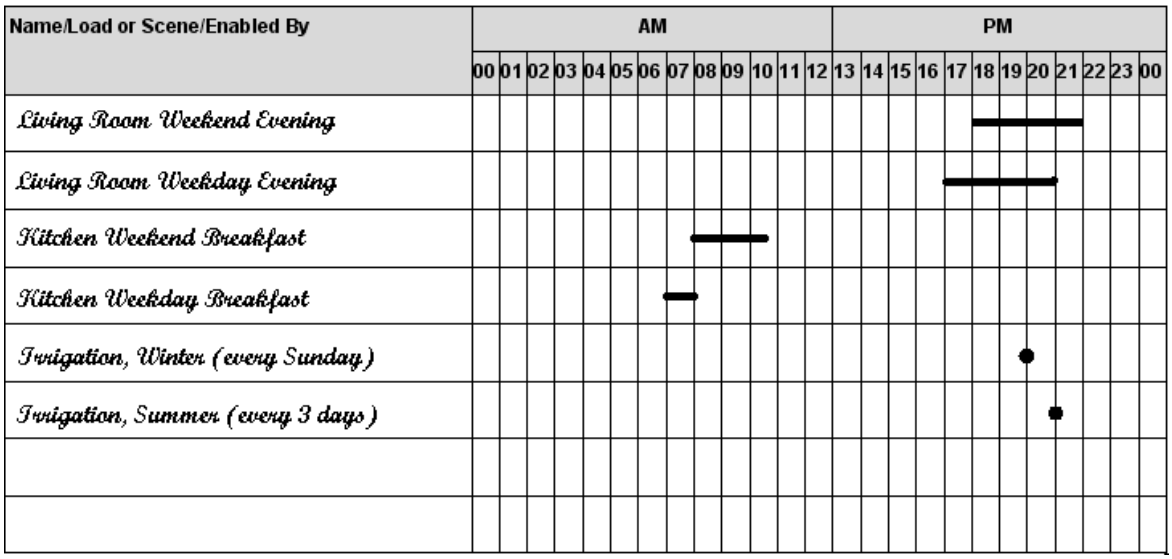
access areas to allow people to move around the house during breaks in the movie but maintain the mood. Some people prefer low level lighting in the actual room the movie is being shown in, this depends upon the size of the television or projection screen and viewer preferences in combination. The display shows the scene in the process of being edited.

11.7 Adding Schedules

Here is an example of some Schedules (this is drawn on the Schedule Pro-Forma) :


Name/Load or Scene/Enabled By
AM
PM
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 00
Living Room Weekend Evening
Living Room Weekday Evening
Kitchen Weekend Breakfast
Kitchen Weekday Breakfast
Irrigation, Winter (every Sunday)
Irrigation, Summer (every 3 days)

Each schedule is given a "Name" which describes the purpose of the schedule. The details of the "Load" (from the C-Bus project) can also be written in.

The kitchen lights, for example are to be turned on automatically for breakfast and so has a schedule entry. The lighting requirements in this case are different according to whether it is a weekday or the weekend (and hence requires two separate schedules).

Some schedules may be different depending on the season. In our example, the Irrigation schedules which activate the Irrigation Control need to come on a different times during the year. This can be achieved by :

- selecting different months for each of the two Schedules in the Schedule Editor; or
- using an enabling Group Address which is enabled only during the Winter months for the Winter Schedule. So although the Irrigation schedule in this case would contain no limits except for the hours of operation, it is enabled by the Winter Group Address which is only on during that time. The Summer Schedule would be implemented in the same way.

One other point regarding the actual Event being scheduled: the event can be either Group Address related or Scene related. In the former a Group Address is pulsed for a given period or set to a particular level. In the latter a scene is fired at the scheduled time. Most of the schedules in our worked example are of this type. Since more than one Group Address is involved, each of these schedules will require a scene to turn a number of lights on and another scene to turn a number of lights off. Thus at the commencement of the scheduled period the "on" scene is fired and at the expiry the "off" scene is fired.

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12 Error Messages

12.1 Purpose

Error messages are used to indicate several things :

- You have attempted to do something wrong, or have forgotten to do something essential
- To warn that something you have done or not done may cause problems
- To get confirmation of something you have requested

When an error message appears, you can click on the **Help** button to get more information about the cause and solution to the problem.

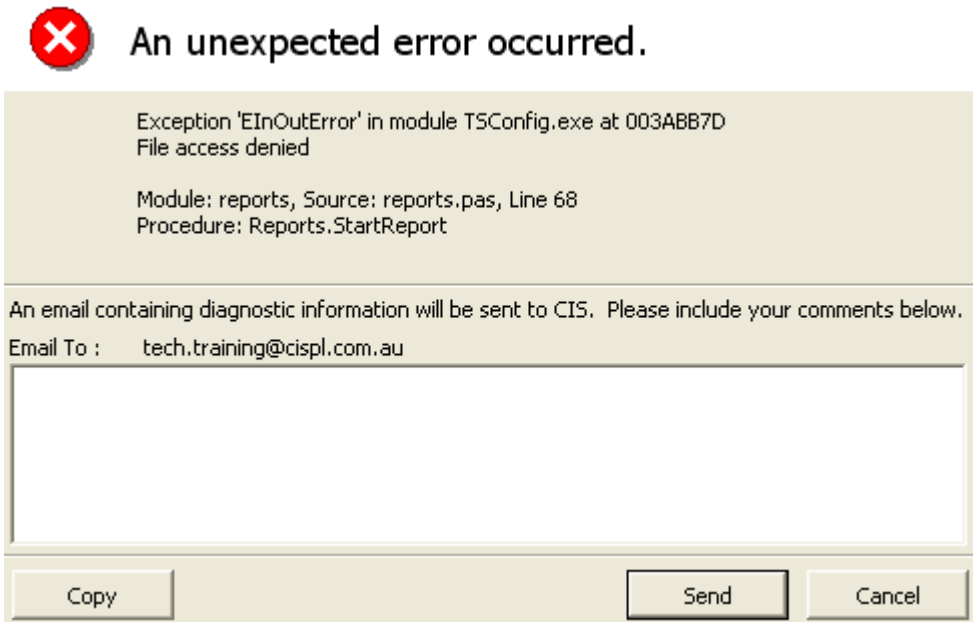
12.2 Suppressing Error Messages

Some error messages can be suppressed so that they don't appear. These error messages will have a check box that can be selected so that the error message is not shown again.

To enable all of the error messages, select the **Options | Enable Error Messages** menu item.

12.3 Reporting Errors

When an unexpected error occurs, you may see a form which looks like :


An unexpected error occurred.
Exception 'EInOutError' in module TSConfig.exe at 003ABB7D
File access denied
Module: reports, Source: reports.pas, Line 68
Procedure: Reports.StartReport
An email containing diagnostic information will be sent to CIS. Please include your comments below.
Email To : tech.training@cispl.com.au
Copy
Send
Cancel

To report the error to Clipsal Integrated Systems :
1. Enter some comments which describe what you were doing when the error occurred. ***Without this information, it is probably going to be impossible for CIS to diagnose your problem.***
2. Either click on the **Send** button to send the details to CIS or click on the **Copy** button and then paste the information into an e-mail.

When reporting errors, the following information will help with the diagnosis of the problem :
1. Details of your computer (processor, memory, hard disk)
2. Details of your operating system
3. Version of the software being used
4. Details of the error (error number etc)
5. What you did to make the error occur
6. Was it possible to make the error occur again ?

To support the diagnosis, you may also need to provide :
1. Your Schedule Plus project file

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2. Your C-Bus Project File

12.4 Message List

12.4.1 Confirm 14002

Message

"Are you sure you want to delete the selected ***item*** ? You will not be able to undo this action."

Reason

You have attempted to delete a Page, Schedule, Access Level or User. It is not possible to undo this action.

Actions

Click on **Yes** to delete the item. Click on **Cancel** to leave the item.

12.4.2 Warning 14003

Message

"Password Incorrect."

Cause

You have entered an incorrect password.

Solution

Either :
- Enter the correct password;
- Obtain help from someone that knows the right password; or
- Do not attempt to perform an action for which you are unauthorized.

12.4.3 Error 14004

Message

"This file type can not be loaded."

Cause

The file type you have attempted to load is incorrect. The file type is defined by the extension of the file name.

For example, the file "c:\temp\test.ctd" is a Schedule Plus project file.

Solution

Select a file of the correct type. The file type is shown in the Open File dialogue box.

12.4.4 Confirm 14005

Message

"File Exists. Do you want to replace it ?"

Reason

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The file name that you have selected already exists. If you save the file with this name, it will over-write the existing one and the existing one will be lost.

Action

If you want to replace the existing file, click on Yes.

If you want to save the file as a different name, click on No.

12.4.5 Confirm 14006

Message

"*File Name* data has changed. Do you want to save the data ?"

Reason

You have performed an operation that will close the project, but the data in your project has changed since you last saved it. If you do not save it, the data will be lost.

Action

Click on Yes to save the changes to the data.

Click on No to lose the changes to the data and continue with the operation.

Click on Cancel to cancel the operation.

12.4.6 Error 14007

Message

"Error creating Dialogue Box."

Cause

The selected dialogue box could not be created. This is generally due to a shortage of Windows resources.

Solution

Close down any other applications that are running to make more Windows resources available.

12.4.7 Warning 14008

Message

"Screen type has been changed. Some components may be affected."

Cause

The size of the project screen has been changed. If the screen has been made smaller, components that were near the edges may have been moved to fit them onto the new screen.

Solution

Check pages to ensure that the placement of components is still suitable.

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12.4.8 Error 14009

Message

"Could not open Clipsal web site."

Cause

The Clipsal Web Site could not be opened. This may be due to a fault with your web browser or with your internet connection.

Solution

Check your web browser and Internet connection to make sure they operate correctly.

12.4.9 Warning 14010

Message

"This image is too large to fit on the screen. It will be reduced in size automatically."

Cause

The selected image is larger that the project screen size.

Solution

There are several solutions :
- Do nothing – the image will automatically be reduced in size.
- Use an image editing program to change the size of the image.
- Use a smaller image.

12.4.10 Confirm 14011

Message

"Do you want to change the scene levels ?"

Reason

You are about to open the Scene Editor. This will allow you to add and change scenes.

Action

Click on Yes to open the Scene Editor.

Click on No to not open the Scene Editor.

12.4.11 Error 14012

Message

"Error Connecting to C-Gate."

Cause

The connection to C-Gate has been lost, or could not be established.

Solution

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Check that C-Gate is running at the selected IP Address (see C-Bus Project).

Try connecting to C-Gate using Telnet.

Refer to the C-Gate documentation for more details.

See also Frequently Asked Questions

12.4.12 Error 14013

Message

"Could not connect to C-Gate at *IP Address*."

Cause

The connection to C-Gate could not be established at *IP Address*.

Solution

Check that C-Gate is running at the selected IP Address (see C-Bus Project).

Try connecting to C-Gate using Telnet.

Refer to the C-Gate documentation for more details.

See also Frequently Asked Questions

12.4.13 Information 14014

Message

"Connected to C-Gate ***version***."

Reason

The connection to C-Gate was successful. The *version* of C-Gate is also given.

Action

Click on OK.

See also Frequently Asked Questions

12.4.14 Error 14015

Message

"There are too many Applications used. Maximum is x."

Cause

You have attempted to use too many Application numbers. The software can only support a limited number of different Application numbers.

Solution

Use less Application numbers.

If necessary, split the control across several projects.

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Refer to the Project Summary to determine where the Applications have been used.

12.4.15 Information 14016

Message

"No errors found in project."

Reason

The project was checked and found to be free of design errors.

Action

Click on OK.

12.4.16 Error 14017

Message

"File *File Name* does not exist."

Cause

The file *File Name* could not be found.

Solution

Check that the file name is correct.

Check that you have the necessary privileges to access the file.

Check whether the file does exist.

12.4.17 Information 14018

Message

"A Short-Cut has been created on your desktop."

Reason

A short-cut to the Schedule Plus software and the currently loaded project file has been placed on your computer desktop.

Action

Click on OK.

See also Frequently Asked Questions

12.4.18 Confirmation 14019

Message

"An image with the name "*FILE NAME*" is already being used. Only one image with a given name can be used in a project. Do you want to use the existing image or the new one ?"

Cause

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There is already an image being used with the name *FILE NAME*. For example, you may have already used an image c:\Clipsal\ImageLibrary\clock.bmp and you have just added the image c:\temp\downloads\clock.bmp. When the project is saved, image files will be copied into the project directory, hence it is not possible to use two different images with the same name.

You can look at the Project Summary for a list of all images used by the Project.

Solution

Click on the **Existing** button to use the existing image instead.

Click on the **New** button to use the new image. Note that this new image will be used everywhere in the project where this image name is used.

12.4.19 Error 14020

Message

"There is no C-Bus Project selected. Open the Project Details form and select a C-Bus Project."

Cause

The C-Gate networks file is created from the C-Bus Project file. There is currently no C-Bus Project file selected.

Solution

Open the Project Details dialogue box and select a C-Bus Project.

12.4.20 Error 14021

Message

"Please save the Project first."

Cause

The Project files need to be saved before they can be archived.

Solution

Save the Project, then archive the Project.

12.4.21 Error 14022

Message

"Program *PROGRAM NAME* could not be run because "*REASON*"."

Cause

The program *PROGRAM NAME* could not be run. The *REASON* explains the cause.

Solution

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Reason	Solution
"The specified file was not found."	Check the file name. Check that the file name exists.
"The specified path was not found."	Check the file path. Check that the file path exists.
"The .EXE file is invalid (non-Win32 .EXE or error in .EXE image)."	Check that the file will run manually.
"The filename association is incomplete or invalid."	Check the Windows file associations with the filename extension.
"The specified dynamic-link library was not found."	Check the file name. Check that the file name exists.
"There is no application associated with the filename extension."	Check the Windows file associations with the filename extension.
"There was not enough memory to complete the operation."	Close down some other programs to free up some memory.
"A sharing violation occurred."	Close any program which is also using the file.
"The operating system denied access to the specified file."	Check that you have access to this file. There may be access restrictions on this file.

12.4.22 Error 14023

Message

"Could not connect to C-Bus. *REASON*"

Cause #1

The connection could not be made to C-Bus because the serial port was being used by another program.

Solution #1

Close down any other programs that are using the serial port.

Cause #2

The connection could not be made to C-Bus because an operating PC Interface could not be found.

Solution #2

Check that the right serial port is selected in the Program Options.

Check that a PC Interface is connected.

Check all Cables.

Check that C-Bus power is applied.

Check that the PC Interface has power (the LED(s) should be lit).

12.4.23 Error 14024

Message

"One or more used networks do not exist in project *PROJECT NAME*. Please select another project or close this program and edit the selected project.

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Click Show to see a list of networks.
Click Continue to select another project.
Click Close to close the program."

Cause

The Schedule Plus Project uses networks which do not exist in the C-Bus project. The Schedule Plus software can not use or control networks which do not exist in the project database.

Solution

Click on **Show** to see a list of the networks in the Schedule Plus Project and the C-Bus Project.
Click on **Continue** to return to selecting a C-Bus project.
Click on **Close** to close the Schedule Plus software and edit the C-Bus Project.

To resolve the problem :

- Select a different C-Bus Project; or
- Remove any use of the networks which are not supported; or
- Edit the C-Bus project to include the necessary networks.

12.4.24 Error 14025

Message

"Error using C-Bus database."

Cause

There was a fault when using the C-Bus data base.

Solution

Click on OK.

12.4.25 Error 14026

Message

"Please select a scene."

Cause

The C-Bus action has been set to set a Scene, but no scene was selected.

Solution

Select the Scene to be executed from the drop-down list.

12.4.26 Error 14027

Message

"Please select a valid C-Bus Application."

Cause

No C-Bus Application was selected.

Solution

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Select a valid C-Bus Application from the drop-down list.

12.4.27 Error 14028

Message

"Please select a valid C-Bus Group Address."

Cause

No C-Bus Group Address was selected.

Solution

Select a valid C-Bus Group Address from the drop-down list.

12.4.28 Error 14029

Message

"Group Address Tag could not be added. Please close this program and use the C-Bus Tool Kit."

Cause

There was a problem creating a new Group Address tag.

Solution

Use the C-Bus Tool Kit to add the Group Address tag.

12.4.29 Error 14030

Message

"Group Address Tag could not be edited. Please close this program and use the C-Bus Tool Kit."

Cause

There was a problem editing a Group Address tag.

Solution

Use the C-Bus Tool Kit to edit the Group Address tag.

12.4.30 Error 14031

Message

"Level Tag could not be added. Please close this program and use the C-Bus Tool Kit."

Cause

There was a problem creating a new Level tag.

Solution

Use the C-Bus Tool Kit to add the Level tag.

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12.4.31 Error 14032

Message

"Level Tag could not be edited. Please close this program and use the C-Bus Tool Kit."

Cause

There was a problem editing a Level tag.

Solution

Use the C-Bus Tool Kit to edit the Level tag.

12.4.32 Confirm 14033

Message

"This file is for a different project type/screen size. The project will be converted to suit."

Reason

The page(s) being added to the project are for a different project type.

Action

Click on OK to continue. The pages will be resized automatically to suit. Any features present in the imported pages which are not supported by the project type will be removed automatically.

12.4.33 Error 14034

Message

"Error reading file."

Cause

There was an error in the file being read.

Solution

Check that the file exists and you have read access rights.

Check that the file has not been corrupted.

An Schedule Plus project file can be loaded into Internet Explorer to verify whether it is corrupted.

12.4.34 Error 14035

Message

"Project could not be saved. Please check : - directory write privileges - file "read only" attributes"

Cause

The project file could not be written.

Solution

Check whether you have write rights to the directory where the file is being saved.

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Check whether the file is read only.

12.4.35 Confirm 14036

Message

"There are duplicate Scene Triggers. These scenes will trigger each other. Do you want to change a Scene Trigger ?"

Reason

Two or more scenes have the same trigger conditions. If this trigger is received, all of these scenes will be executed.

Action

Click on Yes to go back to editing the scenes.

Click on No to leave things as they are.

12.4.36 Error 14037

Message

"There are circular Scene Triggers. These scenes will trigger each other. Please change a Scene Trigger or the scene item which is doing the triggering."

Cause

A series of scenes directly or indirectly trigger each other. If any one of these scenes gets triggered, it will cause enormous amounts of C-Bus traffic indefinitely.

Solution

Change a scene trigger or change a scene item which is triggering another scene.

12.4.37 Error 14038

Message

"There are duplicate Scene names. Please rename one or more Scenes."

Cause

Two or more scenes have the same name.

Solution

Rename one or more of the scenes.

12.4.38 Error 14039

Message

"Can not add any more Scenes. Maximum is x."

Cause

There is a limit to the number of scenes which can be stored, and that limit has been reached.

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Solution

Reduce the number of scenes, or store some of the scenes in other C-Bus devices.

12.4.39 Error 14040

Message

"Passwords do not match."

Cause

The two passwords entered are different.

Solution

Enter the two passwords again carefully.

12.4.40 Confirm 14041

Message

"The project has ***Error Type***. Do you want to see details ?"

Reason

The project has been found to have some problems which may cause it to behave in an undesirable or unexpected manner.

Action

Click on **Yes** to see a list of the problems.

Click on **No** to ignore the problems. **This is not recommended.**

12.4.41 Error 14042

Message

"Changes can not be made to C-Bus Connection while connected. Please disconnect from C-Bus before making changes."

Cause

Changes have been made in the connection to C-Bus. These can not be implemented while C-Bus is still connected.

Solution

1. Disconnect from C-Bus.
2. Make the changes to the C-Bus connection.
3. Connect to C-Bus.

12.4.42 Warning 14043

Message

"Triggering a scene on the Lighting Application may cause it to be activated by other scenes and cause circular scene triggering."

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Cause

A Scene is triggered on the Lighting Application.

A series of scenes within this software and externally may directly or indirectly trigger each other. If any one of these scenes gets triggered, it will cause enormous amounts of C-Bus traffic indefinitely.

Solution

Change the Scene trigger to the Trigger Control Application, unless it must be on the Lighting Application.

12.4.43 Warning 14044

Message

"Setting levels on the Control Application may trigger other scenes and cause circular scene triggering."

Cause

A Scene is controlling the Trigger Control Application.

A series of scenes within this software and externally may directly or indirectly trigger each other. If any one of these scenes gets triggered, it will cause enormous amounts of C-Bus traffic indefinitely.

Solution

Change the Scene item from the Trigger Control Application unless you are certain that it can not trigger any scenes.

12.4.44 Error 14045

Message

"Could not create file *FILE NAME*."

Cause

The file could not be created.

Solution

Check that the file name is valid.

Check that the file path is valid.

Check that you have write rights to the file directory.

Check that the file is not read only.

12.4.45 Error 14046

Message

"Archiving Failed."

Cause

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The archive file could not be created.

Solution

Check that the file name is valid.

Check that the file path is valid.

Check that you have write rights to the file directory.

Check that the file is not read only.

Check that all of the files to be archived exist.

12.4.46 Information 14047

Message

"The Archive will be copied to the Project directory."

Reason

An archive file is about to be placed in the Project directory.

Action

Click on OK.

12.4.47 Error 14048

Message

"Please select a project directory."

Cause

A directory to store the archive file has not been selected.

Solution

Select a Project Directory.

12.4.48 Error 14049

Message

"Please select an archive file."

Cause

There is no valid archive file name.

Solution

Enter the file name of the archive to open.

12.4.49 Warning 14050

Message

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"Image "*IMAGE NAME*" is missing."

Cause

An image file could not be found.

Solution #1

Obtain the missing image file and put a copy in the project directory.

Solution #2

Delete the image from the project.

12.4.50 Error 14051

Message

"File *FILE NAME* could not be opened."

Cause

There was an error while trying to open the file.

Solution

Check that the file exists.

Check whether you have read rights to the directory.

12.4.51 Error 14052

Message

"Can not add any more pages. Maximum is x."

Cause

There is a limit to the number of pages which can be stored, and that limit has been reached.

Solution

Reduce the number of pages used, or combine several together.

12.4.52 Error 14053

Message

"Can not add any more Components. Maximum is x."

Cause

There is a limit to the number of components which can be stored on each page, and that limit has been reached.

Solution

Remove some components or move some components to another page.

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12.4.53 Error 14054

Message

"Can not add any more Schedules. Maximum is x."

Cause

There is a limit to the number of Schedules which can be stored, and that limit has been reached.

Solution #1

Delete some Schedules.

Solution #2

Use Schedules to set scenes rather than controlling Groups to minimise the number of different Schedules needed.

12.4.54 Error 14055

Message

"Error in Daylight Savings Data"

Cause

There is an error in the data which has been entered for the Daylight Savings data.

Solution

Check each of the parameters on the Daylight Savings tab of the Project Details dialogue box.

12.4.55 Confirm 14056

Message

"Are you sure you want to delete the Schedule Collection and all of its Schedules ?"

Reason

Deleting a Schedule Collection will remove all of its Schedules. This action will not be able to be undone.

Action

Click on Yes to delete the Schedule Collection and its Schedules

Click on No to cancel the delete operation.

12.4.56 Error 14057

Message

"There are too many C-Bus Networks used. The limit is x."

Cause

There is a limit to the number of Networks which can be stored, and that limit has been reached.

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Solution

Reduce the number of Networks being used. Refer to the Project Summary to determine where the Networks have been used.

12.4.57 Error 14058

Message

"Network(s) *NETWORK NAME* are not supported by C-Gate. Please update the C-Bus Project file."

Cause

One or more networks used in the project are not supported by C-Gate.

Solution #1

Remove some networks from the project. Refer to the Project Summary to determine where the Networks have been used.

Solution #2

Update the C-Bus project.

12.4.58 Warning 14059

Message

"There appears to be a discrepancy between the selected Longitude and the selected Time Zone."

Cause

The Longitude that has been entered on the Location Tab is more than 4 hours from the Time Zone selected on the Daylight Savings tab.

Solution

Change the Longitude and/or the Time Zone if one or both is in error. If both are correct, then ignore this message.

12.4.59 Error 14060

Message

"Invalid [Longitude / Latitude]. Must be 1 to 3 numbers separated by spaces or a number followed a decimal point and the fractional part of the number."

Cause

The Longitude or Latitude data has been entered incorrectly.

Solution

Enter the data as one of the following formats :

- Degrees
- Degrees Minutes
- Degrees Minutes Seconds
- Degrees.Fraction

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Valid examples are :

- 123
- 123 30
- 123 30 12
- 123.456

12.4.60 Error 14061

Message

"Latitude must be between 0 and 90 degrees."

Cause

The Latitude is outside of the range 0 to 90 degrees..

Solution

Change the Latitude to the correct value.

12.4.61 Error 14062

Message

"Longitude must be between 0 and 180 degrees."

Cause

The Longitude is outside of the range 0 to 180 degrees.

Solution

Enter the correct Longitude.

12.4.62 Error 14063

Message

"Can not have repeat interval less than 10 seconds."

Cause

The Schedule repeat interval has been set to less than 10 seconds. If the repeat interval is too short, there will be excessive C-Bus traffic generated.

Solution

Change the repeat interval to 10 seconds or more.

12.4.63 Error 14064

Message

"Can not add any more Irrigation Programs. Maximum is x."

Cause

No more Irrigation Programs can be added.

Solution

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Reduce the number of Irrigation Programs used, or attempt to combine some together.

12.4.64 Error 14065

Message

"Can not add any more Irrigation Zones. Maximum is x."

Cause

No more Irrigation Zones can be added.

Solution

Reduce the number of Irrigation Zones used, or attempt to combine some together.

12.4.65 Error 14066

Message

"Can not add any more Irrigation Master Loads. Maximum is x."

Cause

No more Irrigation Master Loads can be added.

Solution

Reduce the number of Irrigation Master Loads used, or attempt to combine some together.

12.4.66 Error 14067

Message

"Scene must have one or more actions."

Cause

The Scene doesn't have any actions (ie. it doesn't do anything).

Solution

Add some Actions to the Scene.

12.4.67 Error 14068

Message

"Pulse / Timer Duration must be greater than 0."

Cause

The Pulse / Timer Duration is currently set to 0, which will not do anything.

Solution

Change it to be more than 0.

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12.4.68 Error 14069

Message

"Two or more Irrigation Programs have the same trigger."

Cause

Two or more Irrigation Programs have the same trigger Group Address and Level. This would cause two Irrigation Programs to be triggered at the same time.

Solution

Change the trigger for one or more Irrigation Programs.

12.4.69 Error 14070

Message

"Two or more Irrigation Zones are the same."

Cause

Two or more Irrigation Zones have the same Application and Group Address.

Solution

Change the Application and/or Group Address for one or more zones.

12.4.70 Error 14071

Message

"Zone duration(s) are too short. Must be at least 15 seconds."

Cause

One or more Zone durations are less than 15 seconds.

Solution

Increase any short Zone durations to be more than 15 seconds.

12.4.71 Error 14072

Message

"Please select a Schedule."

Cause

No Schedule is selected.

Solution

Select a Schedule from the list.

12.4.72 Error 14073

Message

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"Schedule has no Event set. Schedule must execute C-Bus Action, select Page or execute Special Function."

Cause

The Schedule has no event set (ie. it doesn't do anything).

Solution

Change the Schedule so that it executes a C-Bus Action, selects a Page or executes a Special Function.

12.4.73 Warning 14074

Message

"Rain Delay Schedule already exists."

Cause

The Rain Delay Schedule already exists, and can not be created.

Solution

Edit the Rain Delay Schedule if desired.

12.4.74 Warning 14075

Message

"This Schedule will never be executed because there are no Days of the Week/Days of the Month/Months selected."

Cause

The Schedule has no Days of the Week, Days of the Month and/or Months selected. Hence there are no days on which it will be executed.

Solution

Edit the Schedule days to make sure that at least some days are selected in each of the group boxes (**Day of Week**, **Day of Month**, **Month** and **Year**).

See the Schedule Examples for guidance on setting up complex Schedules.

When you have set up a Schedule, use the Year View to confirm that you have it correct.

12.4.75 Warning 14076

Message

"Non-instantaneous Ramp Rates are not supported on the selected C-Bus Application. Unexpected behaviour may occur in a C-Bus System."

Cause

The selected C-Bus Application does not support setting a Group Address to a Level with anything other than an instantaneous Ramp Rate.

Solution

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Change the Ramp Rate to 0 (instantaneous).

12.4.76 Error 14077

Message

"Special Days must have a unique, non-blank name."

Cause

A Special Day name has been entered which is either blank or is the same as another Special Day.

Solution

Change the name of one or more Special Days.

12.4.77 Error 14078

Message

"Could not create Directory."

Cause

A directory could not be created.

Solution

Check that the directory name is valid.

Check that the directory path is valid.

Check that you have write rights to the directory.

Check that the directory or path is not read only.

12.4.78 Confirm 14079

Message

"Do you want a directory created for this project ?"

Reason

There is no directory for this Project. It is recommended that each project be placed in its own directory.

Action

Click on **Yes** to have a directory created automatically for you.

Click on **No** to save the project in the selected directory.

12.4.79 Error 14080

Message

"Can not add any more Special Days. Maximum is x."

Cause

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No more Special Days can be added.

Solution

Reduce the number of Special Days used by deleting any that have already occurred.

12.4.80 Error 14081

Message

"Can not have an Special day in both the "Also On" and "Not On" groups."

Cause

A Special Day is in the Also On group and in the Not On group. This is not logical.

Solution

Remove the Special Day from one of the groups.

12.4.81 Warning 14082

Message

"The Nudge level should typically be between 1% and 50%."

Cause

The amount of the Nudge Up / Nudge Down should typically be between 1% and 50%. If it is less than 1%, then it will not do anything. If it is more that 50%, then maybe another C-Bus function would be more suitable.

Solution

Change the Nudge level to be between 1% and 50%.

12.4.82 Error 14083

Message

"Dimming Ramp Rate can not be zero."

Cause

The Ramp Rate has been set to zero (instantaneous), which is not appropriate for the selected C-Bus type.

Solution

Change the ramp rate to be greater than zero.

12.4.83 Error 14084

Message

"Password length must be between x and y."

Cause

The Password length is either too short or too long.

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Solution

Enter a password with the correct number of digits.

12.4.84 Error 14085

Message

"Can not add any more Users. Maximum is x."

No more Users can be added.

Solution

Reduce the number of Users by deleting any that are no longer required.

12.4.85 Error 14086

Message

"User "x" and "y" have the same password."

Cause

Two Users have the same password, which will make it impossible to determine who is logging in.

Solution

Change the password for one or more users.

12.4.86 Error 14087

Message

"Two or more Access Levels have the same name."

Cause

Two or more Access Levels have the same name, which will make it difficult to determine which level is selected.

Solution

Change the name of one or more Access Levels.

12.4.87 Error 14088

Message

"Can not add any more Access Levels. Maximum is x."

Cause

No more Access Levels can be added.

Solution

Reduce the number of Access Levels by combining several together.

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12.4.88 Error 14089

Message

"This Access Level will never be enabled because ***reason***."

Cause

The Access Level will not ever be enabled due to an error in the set-up :
- There are no Days of the Week selected
- The End Time is not later than the Start Time

Solution

Either :
- Select some days of the week; or
- Change the start and/or end time

12.4.89 Error 14090

Message

"Lowest and highest Access Levels must be always enabled. Do you want them changed for you ?"

Cause

Lowest and highest Access Levels must be always enabled so that the user can not be temporarily locked out.

Solution

Click on the **Yes** button to automatically change the lowest and highest Access Levels so that they are enabled on **Any Day** and **Any Time**.

Click on the **No** button to manually Change the Access Levels.

12.4.90 Confirm 14091

Message

"Do you want to convert Project files to the new format ?"

Reason

The Project files in a selected directory can be converted from the old file format to the new format.

Action

Click on **No** to exit.

To change the Project files, click on **Yes**, then :
- select a directory to have all of its files, and those in its sub-directories, converted
- click on the **Open** button
- a list of all files converted will then be displayed.

12.4.91 Confirm 14092

Message

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"This file was created with an old version of this software. Do you want to save this file as the latest format ?
- Click on Yes to save as the new format.
- Click on No to save as the old format."

Reason

The Project file is the old file format. It can be automatically converted to the new format (including the backup file).

Action

Click on **Yes** to save it with the new format.

Click on **No** to save it with the same format as it currently is.

12.4.92 Confirm 14093

Message

"Do you want to recover the selected load(s) after a power failure ?
- Press Yes to recover these loads.
- Press No to not recover these loads.
- Press Cancel to cancel this operation."

Reason

You have requested that selected load(s) have their Power Failure Recovery status changed.

Action

Click on **Yes** to recover the state of the selected load(s) after a power failure.

Click on **No** to not recover the state of the selected load(s) after a power failure.

Click on **Cancel** to not change anything.

12.4.93 Confirm 14094

Message

"Are you sure you want to delete old/all Special Days ?."

Reason

You have pressed a button to delete all Special Days, or just the old ones (the ones that occurred before today).

Action

Click on **Yes** to delete the Special Days.

Click on **No** to leave the Special Days.

12.4.94 Confirm 14095

Message

"Are you sure you want to delete the selected ***item*** ?"

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Reason

You have attempted to delete a Scene or Scene Action.

Actions

Click on **Yes** to delete the item. Click on **Cancel** to leave the item.

12.4.95 Warning 14096

Message

"*Tag* can not be added/edited unless there is a C-Bus Project selected."

Cause

An Application / Group Address / Level tag can not be edited or added unless the C-Bus Project tags are loaded.

Solution

Select a C-Bus Project.

12.4.96 Warning 14097

Message

"There is a compile error in the logic."

Cause

The Logic Code has an error.

Solution

Review the Errors and the Logic Code. Fix any errors and re-compile.

12.4.97 Error 14098

Message

""***name***" is an invalid Identifier. Use only letters, numbers and underscore."

Cause

Pascal Identifiers may only contain Letters, Numbers and the underscore ("_") character. Additionally, they must start with a letter.

Solution

Re-enter the name.

12.4.98 Error 14099

Message

"Invalid Value."

Cause

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The valid entered is invalid.

Solution

Re-enter the value.

12.4.99 Warning 14100

Message

"Can not add any more System IO Variables. Maximum is ***value***."

Cause

No more System IO Variables can be added.

Solution

Reduce the number of System IO Variables used, or attempt to combine some together.

12.4.100 Warning 14101

Message

"The value was outside of the allowable range. It has been changed to x"

Cause

The System IO Variable value was outside of the range specified by the minimum and maximum values.

Solution

Either :
1. Use the value selected for you; or
2. Change the minimum or maximum

12.4.101 Error 14102

Message

"The minimum must be set to be less than the maximum."

Cause

The minimum value was greater or equal to the maximum value.

Solution

Change the minimum or maximum value.

12.4.102 Error 14103

Message

"Error in ***parameter***"

Cause

The specified parameter has been entered incorrectly.

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Solution

Enter a valid value for the parameter.

12.4.103 Error 14104

Message

"Logic run-time error. Error R***xxx*** - ***Error Description***"

Cause

A run-time error has occurred in the Logic Engine.

Solution

Review the Run Time Error list and fix the problem in the logic code.

12.4.104 Error 14105

Message

"Please select a System IO Parameter."

Cause

A System IO Variable has not been selected.

Solution

Select a System IO Variable.

12.4.105 Error 14106

Message

"There are duplicate System IO names."

Cause

Two or more System IO variable have the same names.

Solution

Change the name of one or more System IO variable.

12.4.106 Warning 14107

Message

"This will stop the logic engine from running."

Cause

The action performed will stop the logic engine from running.

Solution

Run the Logic Engine again if needed.

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12.4.107 Warning 14108

Message

"Performing this Key Function on Scene Groups may cause undesirable behaviour."

Cause

The selected key function (Toggle or Dimmer) can cause strange behavior if the group addresses in the Scene are at different levels. For example, if some Groups are on and some are off, then the toggle key function will switch on the Groups which are off and vice versa.

Solution

Don't use this key function, unless you are happy with the consequences.

12.4.108 Warning 14109

Message

"A combination of AND and OR logic has been used. AND has precedence over OR. Please check that the desired behaviour will result"

Cause

Where a combination of AND and OR logic is used, the Operator Precedence rules are important.

Solution

Carefully check that the logic code is as required. If needed, manually enter brackets in the condition code to obtain the correct result.

12.4.109 Warning 14110

Message

"Do you want to add the current condition before continuing ?"

Cause

The **Next** button was pressed before the condition was added.

Solution

If you want the currently selected condition to be added, click on **Yes**. Otherwise, click on **No**.

12.4.110 Warning 14111

Message

"Do you want to add the current action before continuing ?"

Cause

The **Finish** button was pressed before the action was added.

Solution

If you want the currently selected action to be added, click on **Yes**. Otherwise, click on **No**.

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12.4.111 Error 14112

Message

"Theme Pages have too many levels."

Cause

Theme Pages can be based on other Theme Pages. Too many levels have been created.

Solution

Remove some levels of the Theme Pages.

12.4.112 Error 14113

Message

"Tag Database Error. ***Error Description. Remedy.***"

Cause

A Tag Database error has occured.

Solution

Apply the suggested remedy (normally involves closing Schedule Plus and running the C-Bus Tool Kit).

12.4.113 Error 14114

Message

"Theme components page can not be deleted while there are other Theme Pages."

Cause

The first of the Theme Pages is always the Theme Components page. This can not be deleted while there are other Theme Pages present.

Solution

Delete the other Theme Pages first, then delete the Theme Components Page.

12.4.114 Error 14115

Message

"The Identifier "***name***" has already been used for another ***identifier type***.
Please select another name."

Cause

The selected name has already been used for another Module, Procedure or Function.

Solution

Enter a different name.

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12.4.115 Confirmation 14116

Message

"Are you sure that you want to clear all of the Logic ?"

Cause

You have requested to clear all of the logic code.

Solution

Click on **Yes** to delete the code, otherwise click on the **No** button.

12.4.116 Warning 14117

Message

"Please Note You are entering the Logic Programming Engine of the Schedule Plus software. Logic programming extends the use of Schedule Plus using logic statements defined by the installer. Clipsal Integrated Systems cannot control the contents of program modules written in this Logic Engine and
as such will not be held responsible for any loss or damages that may result from incorrect Logic Engine programming. Clipsal Integrated Systems recommend that only Clipsal Systems Integrators or Approved Installers with the appropriate level of training and accreditation use this part of Schedule Plus Manufacturer's warranties may be void if this is not complied with. Please contact your C-Bus specialists for further details. Please click on the "I Accept" button if you understand the above and wish to use the Logic Engine."

Cause

You are opening the Logic Engine for the first time. Logic needs to be used with caution and should only be used by trained installers.

Solution

Click on the **I Accept** button to accept the conditions of use and open the Logic Engine, otherwise click on **I Don't Accept**.

12.4.117 Warning 14118

Message

"Logic can not be edited while the Logic Engine is running."

Cause

It is not possible to edit the Logic code while the Logic Engine is running.

Solution

Stop the Logic from running, then make changes.

12.4.118 Warning 14119

Message

"Please add a comment."

Cause

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A comment has not been entered.

Solution

Enter a descriptive comment.

12.4.119 Error 14120

Message

"Can not add any more Modules. Maximum is x."

Cause

No more Modules can be added.

Solution

Reduce the number of Modules used, or attempt to combine some together.

12.4.120 Confirmation 14121

Message

"Access Levels have not been defined. Do you want the default levels created ?"

Cause

There are no Access Levels defined. The default Access Levels can be created for you.

Solution

Click on **Yes** to create the default Access Levels, otherwise click on **No**.

12.4.121 Error 14122

Message

"Version ***x***, build ***y*** or later of C-Gate is required."

Cause

An old version of C-Gate has been found.

Solution

Install the latest version of C-Gate.

12.4.122 Confirmation 14123

Message

"Do you want a default description to be given to this component ?"

Cause

The Component noes not have a meaningful description. A default description (based on the C-Bus Group Address name, Scene name or Special Function) can be added to the Component.

Solution

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Click on **Yes** to have the default name applied, otherwise click on **No**.

12.4.123 Confirmation 14124

Message

"Controlling Group Addresses on this Application may cause unexpected behaviour. Are you sure you wish to use this Application ?"

Cause

Some C-Bus Applications are reserved for specific purposes. Using these Applications for other purposes can cause problems for a C-Bus installation.

Solution

Click on the **Yes** button to continue. If you are not sure what you are doing, click on the **No** button.

12.4.124 Error 14125

Message

"You can not edit the details of users with higher access levels."

Cause

You can only edit the details of users of your level or below.

Solution

Only someone with a higher access level can change the details of the selected user.

12.4.125 Error 14126

Message

"Error in Location data."

Cause

There is an error in the data entered for the location.

Solution

Enter valid data.

12.4.126 Confirmation 14127

Message

"Do you want to close the Schedule Plus software ?"

Cause

Your action will close the Schedule Plus software.

Solution

To close, click on the **Yes** button, otherwise click on the **No** button.

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12.4.127 Error 14128

Message

"Please select a file."

Cause

A file has not been selected.

Solution

Select a valid file name.

12.4.128 Information 14129

Message

"The Schedule Plus program will be minimised. It can be maximised from the Task Bar."

Reason

The Schedule Plus software is about to be minimised.

Action

Click on **OK** to continue. To maximise the software again, click on the Schedule Plus icon on the Windows task bar.

12.4.129 Error 14130

Message

"Please enter a unique page name."

Cause

The page name entered is not unique.

Solution

Enter a unique page name.

12.4.130 Error 14131

Message

"The ***x*** function is not supported for the **y**."

Cause

Software function ***x*** is not supported by the current project type (***y***).

Solution

Don't try to use this function with this project type.

12.4.131 Confirmation 14132

Message

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"The slider Height and Width appear to be wrong for this orientation. Would you like them swapped ?"

Cause

A vertical slider/bar graph normally is taller than it is wide. A horizontal slider/bar graph is normally wider than it is tall. The height and width are not what is expected for the current orientation.

Solution

Click on the **Yes** button to swap the height and width. Click on the **No** button to leave them as they are.

12.4.132 Error 14628

Message

"A template Project can not be transferred to the unit."

Cause

The currently open Project is a Template. These can not be transferred to a unit.

Solution

Save the Project as a normal project and then transfer.

12.4.133 Error 14800

Message

"*URL* is not a valid URL"

Cause

The Uniform Resource Locator (URL) is invalid. It should look something like :
http://www.myhouse.com

Solution

Enter a valid URL..

12.4.134 Information 14801

Message

"Press CTRL + S to exit Operation Mode."

Reason

You are about to enter Operation Mode. All menus and tool bars will be hidden. To return to the editing mode from Operation Mode, you will need to press the Control (CTRL) Key at the same time as the "S" key.

Action

Click on OK.

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12.4.135 Error 14802

Message

"Please select a program to run or a file to open."

Cause

You have selected that you want a component Special Function to run another program, but you have not entered a program to run.

Solution

Enter a valid program, file or URL in the "Program or File" edit box.

12.4.136 Error 14803

Message

"*FILE NAME* is not a valid program, file or URL. Please select a valid file to open."

Cause

You have selected that you want a component Special Function to run another program, but you have not entered a valid a program to run.

Solution

Enter a valid program, file or URL in the "Program or File" edit box.

12.4.137 Error 14804

Message

"Changes can not be made to the Internet Connection while connected. Please disconnect Internet access before making changes."

Cause

Changes have been made in the connection to the Internet. These can not be implemented while the Internet is still connected.

Solution

1. Disconnect from the Internet.
2. Make the changes to the Internet connection.
3. Connect to the Internet.

12.4.138 Error 14805

Message

"Error "**Error Description**" was raised trying to save image."

Cause

The operating system generated error "**Error Description**" when the screen image was saved to file.

Solution

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The Error Description should indicate the cause of the problem. Check the following :

Check that the file name is valid.

Check that the file path is valid.

Check that you have write rights to the file directory.

Check that the file is not read only.

12.4.139 Error 14900

Message

"Access Level ***Access Level*** is only available at ***Time*** on ***Day***."

Cause

It is not possible to log in at ***Access Level*** now. This Access Level is only available at a particular ***Time*** on particular ***Days***
.

Solution

Log-in at another time or log-in as a user with a different Access Level.

12.4.140 Error 14901

Message

"There are no users who can edit the Access Control."

Cause

There are no users who can edit the Access Control function of the Schedule Plus software. This can cause all users to be permanently locked out of the software.

Solution

Either
- Add a user with the appropriate Access Level
- Edit the features of an Access Level to make Access Control available

12.4.141 Error 14902

Message

"A load has reached its duration threshold."

Cause

A monitored load has reached its duration threshold.

Solution

Open the Load Monitor to see which load(s) have reached their threshold.

12.4.142 Error 14903

Message

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"E-Mail message was not able to be sent."

Cause

An E-Mail message was not able to be sent.

Solution

Check that :
- Internet access is available
- E-Mail can be sent from another program
- The E-Mail address is correct

12.4.143 Warning 14904

Message

"Access Level "*Level*" does not have features of the level below. This is not the recommended behaviour."

Cause

Access Level "*Level*" does not have one or more features available that are available to the level below. As the Access Levels increase, they should contain ALL of the functions of the levels below. To do anything else may cause unexpected behaviour in the system.

Solution

Activate any features of the levels below Access Level "*Level*" in Access Level "*Level*".

12.4.144 Confirm 14905

Message

"Do you want to monitor the selected load(s) ?
- Press Yes to monitor these loads.
- Press No to not monitor these loads.
- Press Cancel to cancel this operation."

Reason

You have requested that selected load(s) have their Load Monitor status changed.

Action

Click on **Yes** to monitor the selected load(s).

Click on **No** to not monitor the selected load(s).

Click on **Cancel** to not change anything.

12.4.145 Error 14999

Message

"***Error Message***"

Cause

An unexpected error has occurred.

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Solution

If this is causing problems for the use of the Schedule Plus software, please contact Clipsal Integrated Systems technical support. You may need to provide Error Details.

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